

# AMATEUR RADIO

JUNE  
1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

## HERE'S THE *INSIDE* STORY OF



**PHILIPS  
INNOVAL**

Innoval constitutes the only real post-war development in valve technique. It is suitable for all electronic applications including A.M., F.M. and television. Innoval incorporates revolutionary advances in production methods and has the internationally standardised 9-pin Noval base. This construction provides the means by which even the most complex receiving valve types can be made in miniaturised form—with more ruggedness, greater efficiency and uniformity than ever before.

**PHILIPS ELECTRICAL INDUSTRIES  
OF AUSTRALIA PTY. LTD.**

Sydney • Melbourne • Brisbane • Adelaide • Perth



FOR THE EXPERIMENTER & RADIO ENTHUSIAST

Registered at G.P.O., Melbourne, for transmission by post as a periodical.

**9<sub>D</sub>.**

# "HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

**5A Melville Street, Hawthorn, Victoria**

(East Kew Tram Passes Corner, opposite Vogue Theatre)

(Phone: Hawthorn 4465)

Please make Money Orders and Postal Notes payable at North Hawthorn Post Office.

## BARGAINS — BARGAINS — BARGAINS

Communications Receiver AMR200, handsread and continuous coverage from 1.25 to 30 Mc., variable xtal filter and variable selectivity in I.f. channel. Complete with a.c. power supply and 12" speaker in matching grey crackle finished cabinet ..... Our Price **£87/10/-**

Bendix Radio Compass, frequency range 150 to 1500 Kc. Twelve valves, 112 Kc. I.F. channel. Ideal for Q5'er. Complete with genemotor and valves, ..... **£11/10/-**

Transceivers TR9D and TR9F, frequency range 4.3 to 6.6 Mc. Nine valves, English two volt battery series. Two meters, host of parts; for wrecking, clean condition. Price ..... each **£11/10/-**

English Transceivers, TR1196A. Contains nine valves including one EF50, one VT501, one EL32, two EF39, one EK32, one EBC33, two EF36. Check full of useful parts, relays, genemotor, etc. 3 to 9 Mc. 12 volt ..... **£8/10/-**

### Tube Special—7193s, 5/- each

English I.F.F. Units. Tube line-up: two VR135 (high freq. triodes), two VR78 (diodes), four VR65A, Eddystone Butterfly Condenser, 1 uF, 1,000 v.w. Block Condenser, Genemotor 11-12 v. input at 3.8 Amp., output 480 v. 40 Ma. Good assorted quantity of Resistors and Condensers, ideal for wrecking, condition as new ..... **£2 each**

Prop. Motors, suitable for beams, 28 volts input ..... **£4**

Cathode Ray Indicators, American type CPR55ABB. Valve line-up: one 5BP1, four 6AC7s, three 6H6s; in metal case, easily converted to C.R.O. Price ..... **£8/10/-**

Transceiver TR1143, English equivalent of the SCR522. Splendid condition, few only ..... Our Price **£8/10/-**

Communications Receiver General Electric Co. of America, six bands, frequency coverage 7 to 27 Mc. Two RF stages. Splendid order, less power pack **£17/10/-**

American Simpson 2 inch 0-150 Ma. Meters, new, **£1/2/6**

Weston twin scale, 0-40, 0-120 Ma., 3 terminals, **£1/2/6**

English 0.5 Ma. Meters, reading 0-600 Volts and 0-50 Volts. Price ..... **£1/2/6**

6 feet lengths of 1/2 inch Co-ax Cable, 72 ohms, with Connectors both ends ..... **3/-**

### VALVES, Tested, Out of Disposals Gear

5/- each—Bargain Price—7193, 6H6, 6SH7.

7/6 each—2X2, 6A8G, 6B4G, 6C8G, 6G6, 6J7G, 6K7, 6U7G, 6X5GT, 615G, 879, 12AH7, 12C8, 12SG7, 12J5, 12SJ7, 12SK7, AV11.

10/- each—2C26, 6A6, 6AC7, 6N7, 6SL7, 6X3, 9003, 954, 955, 956, 12A6, 1626, 1629, HY613, 5U4.

10/- each—Metal—6B8, 6L7, 6SA7, 6SC7, 6SF7, 6SK7, 6SR7, 6SS7, 12C8, 12SK7, 12SR7.

10/- each—Specials (New)—2A3, 6A6, 6L6G, 6V6, EBF2, EL3, EF50.

17/6 each—6AK5.

25/- each—366 Juniors.

### WE CAN SUPPLY YOU WITH—

#### AMERICAN BC966A I.F.F. UNITS

With a few minor alterations (see Conversion of BC966A in March issue), these Units make a handy Transceiver for 144 or 288 Mc. Contains three 7193s, seven 6SH7s, three 6H6s, 10-point Jones plug and socket, four P.M.G. type relays, ceramicon trimmer, 7-plate split stator midjet condenser, as well as a large assortment of resistors and condensers, v.h.f. chokes, and sockets. Complete with Genemotor **£4**

Less the Genemotor ..... **£3**

Eddystone Receiver "640" as new, complete with instruction book and speaker ..... Our Price **£57/10/-**

High Frequency Receiver, Australian AR301, uses three 954s, one 995, Six 6AC7 I.F. Stages at 30 Mc. Easily converted to 144 Mc. .... **£10 each**

American TA12D four-bands; 12SK7 v.f.o. each band, 807 doubler, two 807s in final, less Modulator. **£17/10/-**

Hammarlund plug-in coil units, contains two variable condensers, coil formers, etc. Price ..... **£2/10/-**

AT10 plug-in coil units, has two variable condensers (approx. 50 pF.) and two coils. Ideal for wrecking. **£1 each**

Interphone Amplifiers, contains 6F8 valve, two transformers, resistors, condensers, etc. .... **£1/10/-**

SCR522 Transmitter Section, has two tested 832s, modulator two 12A6s ..... Our Price **£12/10/-**

### WANTED TO BUY—TYPE 3 MK. II. AND TYPE A MK. III. TRANSCEIVERS

JUNE 1950

Vol. 18. No. 6

# AMATEUR RADIO

Published by the Wireless Institute of Australia,  
Law Court Chambers, 191 Queen Street,  
Melbourne, C.1

## EDITOR:

T. D. HOGAN, VK3HX,  
Telephone: UM 1732.

## MANAGING EDITOR:

J. G. MARS LAND, VK3NY.

## TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

## ASSISTANT TECHNICAL EDITOR:

A. K. HEAD, VK3AKZ.

## COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

## LIAISON:

I. K. SEWELL, VK3IK.

## CIRCULATION:

S. I. ZEUNERT, VK3SZ.

## ADVERTISING REPRESENTATIVE FOR VICTORIA:

W. J. LEWIS,  
20 Queen St., Melbourne, C.1.  
Telephone: MU 5154.

## ADVERTISING REPRESENTATIVE FOR N.S.W. AND QUEENSLAND:

L. W. CRANCH,  
Room 302, 17 Bond St., Sydney.  
Telephone: BU 3879.

## PRINTERS:

"RICHMOND CHRONICLE,"  
Shakespeare St., Richmond, E.1.  
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.1, on or before the 8th of each month.

Subscription rate in Australia is 9/- per annum, in advance (post paid) and A10/6 in all other countries.

Wireless Institute of Australia  
(Victorian Division) Rooms' Telephone is FJ 6997.

## EDITORIAL



### "UNITY IS STRENGTH"

The above is a very old and somewhat overworked saying, but nevertheless is a very true one.

It applies in all levels of society and equally so in Amateur Radio.

The Wireless Institute is very much aware of this fact and, such being the case, is making a very special attempt to enrol ALL licenced Amateurs, as well as other interested people, in our organisation.

A united Institute, with all Amateurs as members and a large associate membership, would become more powerful than it is at present, and would enable more privileges to be obtained for its members.

With this object in view, all members are earnestly request-

ed to endeavour to enrol as new members all non-member Amateurs and also any others interested in the amateur phase of radio with the necessary qualifications to become student or associate members.

You all have friends who are interested in Ham Radio, so why not try and obtain a new member for the Institute right now.

A phone call to your Divisional Secretary will bring you application forms and brochures by mail and then you can do the rest.

For the benefit of Amateur Radio as a whole and, incidentally, each Amateur individually, do your bit and—

### "DO IT NOW."

Federal Executive.

## The Contents . . .

Tranquil Break-In .....	3	Ionospheric Predictions for the	
Crystal Filter S.S.S.C. ....	4	Amateur Bands .....	9
Screen Modulation with Audio		N.S.W. Division North Coast Zone	
Controlled Carrier .....	7	Convention at Urunga .....	11
Abstracts from Overseas Mag-		Twentieth Annual Federal Con-	
azines .....	8	vention of the W.I.A. ....	14
Rules of the Australian DX Cen-		Fifty Megacycles and Above ..	16
tury Club Award .....	9	Federal, QSL, and Divisional	
		Notes .....	17

# Homecrafts

PTY LTD.

## LARGEST STOCK GREATEST BARGAINS



### TABLE RADIOGRAM CABINETS

Walnut Piano Finish Radiogram Cabinets, suitable for 4 or 5 valve Table Radiogram. As illustrated, £6/19/6.



### DISPOSAL BARGAIN

12 volt 300 watt Generators. Completely re-conditioned. Ideal for home lighting plants. Price, as illustrated, only 10 Gns.



### METER BARGAIN

Pocket Type Dual Reading Moving Coil. English Electric test meters. 0-20v., 0-200v. scales. 200 ohms per volt. Complete with leads, as illustrated, 10/-.



### R.C.S. FILTER

L.F.50 Mains Filters, moulded bakelite case. As illustrated, 27/-.



### RECORD CHANGER BARGAIN

English Record Changers, brand new. Plays eight records 10 and 12 inch mixed. Reduced from £18/19/- to £10/19/6 complete.



### HIGH FIDELITY PICK-UP BARGAIN

English Shell High Fidelity Moving Coil Pick-ups. Complete with matching transformer. Reduced from £4/19/- to only 59/6. As illustrated.



### CELL TESTER

Davon Set High Discharge Cell Tester. Tests voltage of each Accumulator Cell under load. As illustrated, price, £3/19/6.



### HIGH GRADE SPINTITES

Available in three sizes, 1/8, 5/32, and 3/16 inch. All priced at 6/- each.



### "ZEPHER" HAND SPRAYER

The new "Zepher" Hand Sprayer has hundreds of uses. As illustrated, small size, 24/6; large size, 26/6.



### MOTOR BARGAIN

Brand New Electric Synchronous Motor. Plays 10 and 12 inch records. Constant speed. Price, as illustrated, 59/6.



### MORSE KEYS

Morse Key Bargains. Brand new Army Type Morse Keys. Small type, as illustrated, only 1/11. Large type, as illustrated, only 2/11.



### MICROPHONES

Again available. English D104 High Fidelity Crystal Microphones. As illustrated, only £4/19/6.

### HOME BROADCASTING MICROPHONES



Home Broadcaster Microphones will work with any ordinary radio. Adds fun to a party. Cut to only 7/11. Plus battery, 2/6. Connecting wire, 2d. per yard.



### IMPORTED AMERICAN EIMAC TRANSMITTING TUBES

Type 35T .. . . . £3 19/-  
Type 35TQ .. . . . £4 12/6  
Type RX21 .. . . . £4 9/-  
Type KY21 .. . . . £5 17/-

Write for Free Characteristic Booklet.



### BARGAIN FOUNDATION KIT

A Few More Available

Bakelite cabinet, chassis, front mounting plate and dial assembly. As illustrated, Only 45/- complete.



### BATTERY CHARGER KIT

Kit of parts to build a 6 volt 4 amp. Battery Charger. Kit includes an English selenium Rectifier, transformer, black crackle finish metal case, 2 terminals, hook-up wire and circuit blue print instruction. 12 volt 3/- extra. Price, as illustrated, £4/10/-.



### E.M.A. FLEXIBLE COUPLING

Flexible Coupling, polystyrene insulated. Sizes 1 x 1/2 or 1 x 1. Price, as illustrated, 4/6.



### BARGAIN TUNING

### CONDENSERS

Tuning Condensers complete with trimmer. Two-gang, reduced to 8/11. Three-gang, reduced to 12/11.

COUNTRY AND INTERSTATE CLIENTS PLEASE ADD FREIGHT OR POSTAGE.

290 LONSDALE STREET, MELBOURNE

Central 4311

# TRANQUIL BREAK-IN

By H. MORGAN,† A.M.I.R.E., and E. M. WADDLE,‡ VK4GZ

It will be readily conceded that the ultimate in operating convenience cannot be obtained with the monologue type of QSO which is in general use on the c.w. portions of the Ham bands.

The purpose of this article is to show that tranquil break-in is not a myth, but a reality. In the past, various attempts have been made to achieve this happy state at 4GZ but without success. A system was tried which employed r.f. pick-up and rectification fed to the grids of all r.f. tubes. This was not found to give complete cut off of the receiver, and the fast time constants necessary lead to instability.

For break-in to be successful, the receiver should be allowed to run while transmitting, and no clicks or thumps should be heard in the headphones.

Break-in consists, essentially, in keying the crystal oscillator or v.f.o., and biasing the remainder of the rig until each stage draws a small amount of plate current with the key in the up position. This helps considerably in the prevention of key clicks, as there is always a small load on each stage with the excitation removed.

For those who look with horror upon the idea of keying the oscillator stage, it can be completely shielded and a buffer or doubler stage keyed instead.

Here we would like to point out that if a "Clapp" Oscillator is built like a battleship, you can key it in the cathode without any clicks or chirps, and there is no necessity to use a keying filter—provided, and this is important, choke input with a bleeder is used on all power supplies including the final. (Here a receiver vibrator choke insulated from ground, was found to give adequate smoothing.) A small amount of standing plate current is present on all stages. With this set-up no clicks are recorded on the Ham bands, and Radio Australia can be listened to without interference on a b.c. set operating from the same power point, and placed along side the 100 watt rig. Prior to using choke input it was impossible to listen on that portion of the short wave band.

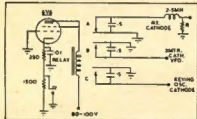
The system in use in the R.A.A.F. ATS/AR8 combination lifts the cathodes of all the r.f. and i.f. stages of the receiver while at the same time the cathodes of all the tubes in the transmitter are closed, and the antenna changed from the receiver to the transmitter. This was done by means of an antenna relay, the coil of which was energised by a 24 volt d.c. supply from a metal rectifier.

The type of antenna in use at 4GZ—ground plane with co-ax feed—precluded the use of this system of switching, and not enough contacts on existing d.p.d.t. relay, so another idea was worked out.

One drawback to relay keying is the necessity to have a source of d.c. for energising the coil. With the disposal types about, this means 24 volts. Keying this will result in sparking at the key. To obviate this, a 2,000 ohm P.M.G. relay was operated by the plate current of a triode connected 6V6 as shown in the diagram.

Overseas circuits for break-in usually specify a high resistance relay energised from the transmitter. This has two drawbacks. (1) A high ohmage sensitive relay is required, and is not readily obtainable cheaply. (2) If the relay is energised from the transmitter, the contacts breaking the receiver cathodes cannot be arranged to operate before the transmitter comes on the air.

The earth end of the resistor network in the cathode of the 6V6 (1,500 ohms) is sufficient to bias the tube close to cut off. When this resistance is shorted out by the key, the tube draws normal current, bias is supplied by the resistance and condenser in the normal cathode circuit.



R—See text for value.

Relay—P.M.G. type 2,000 ohm coil, adjust contacts so that contact A opens slightly before B closes.

The layout on the receiver side is a noise eliminator ahead of the receiver using push pull acorns, and four acorns in the front end of a double conversion job using three i.f. stages. (By virtue of triode mixer and oscillator in the converter section and low noise level mixer in the main receiver, its noise level is very low.)

One set of contacts on the relay opens a fraction of a second before another set closes, and this opens the cathodes of all the acorns and the mixer and the three i.f. stages (11 in all) of the main receiver. The closed contacts close the cathode of the "Clapp" oscillator in the transmitter. There is another set of contacts on the relay which keys a tone oscillator for keying monitoring purposes.

A separate antenna is used which is about 20 feet from the ground plane. The receiver is not shielded and is about a foot away from the transmitter.

The resistor R from the common cathode receiver line to ground should

be such that there is a potential difference of 20 volts between key up and key down conditions. The 0.5 uF. condensers are across the relay contacts to absorb any sparking which occurs on making and breaking the cathodes.

When resistor R is satisfactorily adjusted there is NO clicks or thumps in the receiver, only the sound of the tone oscillator. In case some doubting Thomas may think that the note from the tone oscillator would drown the sound of the clicks, we can assure them that with the tone oscillator disconnected, all that is heard is a s-s-s-s-s sound in the headphones. A switch is incorporated to ground the cathodes for spotting purposes.

The h.t. supply for the 6V6 can be obtained from the same source of supply as that which supplies the keying oscillator.

With this system the operator can cease calling a station when he hears that the station has gone back to somebody else. Thus long calls and unnecessary QRM can be avoided. Also, if the station being worked is also equipped with break-in, he can interrupt the sender for a repeat, instead of waiting until the over is finished, and saying what did you say in the middle of the last over OM?

The only complaint that we have at 4GZ about the whole idea is the scarcity of stations whom are equipped to work complete break-in.

Don't forget fellows, if you hear a chap calling you and adding BK after his call, break him, even if you cannot work complete break-in, he will hear you and stop calling you, giving you the sign to go ahead. A little QRM will be avoided and in these days of overcrowded bands, even a little less QRM is worth while. Think it over, and give it a try. The system here has been going for the past months with complete success.

The transmitter at 4GZ is "Clapp" oscillator with 6J5, on 3.5 Mc. 1852 untuned isolator, 6L6 slug tuned buffer with seven switched crystals, which are never used now, 6F6 tuned 7 Mc. doubler, 807 14 mc. doubler and push pull 850Bs in the final. All power supplies are of the double section filter with choke input, and the plate of the osc., plate and screen of isolator is fed from VR105 regulator tube. As mentioned before, the cathode of the 6J5 is keyed through the relay.

The antenna is a ground plane made of 5/8th conduit and is fed through a co-ax line coupler (see A.R.R.L.), to the final.

In passing, we would like to hear of other Hams who use this antenna on 14 Mc. The conduit stands up very well and has been in use for two years now. Prior to the ground plane, a vertical J, also made of conduit, was in use, but a cyclonic disturbance brought it down.

The writers will be pleased to answer any queries either from 4GZ or by letter.

† Mill Street, Charters Towers, Qld.

‡ Aledue Street, Charters Towers, Qld.



# CRYSTAL FILTER S.S.S.C.

BY DR. LEO H. McMAHON,\* VK2AC

When anything new is introduced, one of the first things we say is what can I get out of it. In the case of S.S.S.C. the thing we do get is the effect of greatly increased power and with all respect to the decibel, the chap with the power gets the results.

In the case of a.m. we are allowed 100 watts input plus fifty watts of modulating power. This is shared between two side bands. In the case of single sideband, it is not difficult to get 80 watts in one side band which is the equivalent of an a.m. carrier power of 320 watts plus audio. It takes a lot of gear to get and modulate 320 watts of a.m. Another point is we take up very much less of the band and we occupy the band only while we are speaking.

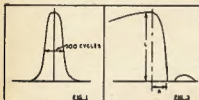


Fig. 1.—Condition of balance.

Fig. 3.—Condition of unbalance. This figure (3) also shows the response of the filter using two crystals of a frequency of 5180 Kc.

The last two points are general improvements for the value of all, but the first one is to our own good. What if you run two tubes Class B at 100 watts input unmodulated? You will get about 500 watts audio out in one side band. Use a beam with a 10 db gain and you have a signal equivalent to that of 20 kilowatts and are still inside the law. Looks good anyway, doesn't it? The article by VK7LE in "A.R." for July, 1949, sets out very well the advantages and disadvantages of S.S.S.C.

Two main systems of obtaining single sideband have been described in this magazine. That of VK7LE uses an audio

filter. For the ordinary chap, these filters are out of the question. The author was quoted £60 for one in Sydney and to make one is beyond the scope of most of us. The phasing system of VK4FN is even more difficult to get going as it is difficult to get the matched resistors and condensers. Moreover, the author cannot see how these will maintain their balance over time and weather changes.

A system with which we have had some experience is the use of crystal filters. A good description of the principle involved is given in the "Short Wave Magazine" for July, 1949, which is available in the W.I.A. libraries.

In simple terms, the principle is as follows: When we use the ordinary crystal filter of 455 Kc. for c.w. reception it has, when the stray capacities are balanced out by our phasing control, a symmetrical output with a bandwidth of about 300 cycles. It is only when we unbalance it by our phasing control that we get our rejection notch and we can put that notch on either side. As we decrease our response on one side, we increase it on the other. If instead of 455 Kc. with a bandwidth of 300 cycles, we use ten times that frequency we should have a bandwidth of 3,000 cycles which is all we want. Then by bringing our rejection notch in as close as we can to our reference frequency, we get a steep side and a sloping side. The nearer we bring our rejection notch the further we have to unbalance our phasing arm.

By putting two such filters in series we have a greatly increased effect and enough to enable us to wipe out one side band. We can wipe out our carrier with a balanced modulator.

Thus we have the system—

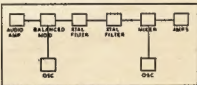


Fig. 2.

The frequency "a" from one side of the rejection notch to the top of the curve is about 400-500 cycles. The author has no means of measuring the db difference, but it is quite sufficient for Amateur purposes.

If we put our carrier about midway up the slope of the filter we will have a good response on one side band and on the other some response for the first 200-300 cycles and very little otherwise. The response to the first few hundred cycles can be decreased by using small value capacitances in the audio system.

The reason 5180 Kc. is used is because two of them were on hand. 5360 Kc. was first tried, but it was found that to get on 7 Mc., somewhere around 1750 Kc. had to be added, and the fourth harmonic of that fell into the 7 Mc. band and caused no end of trouble. Now 2 Mc. is fed in and that trouble is eliminated.

Referring to the filter section of the main diagram (Fig. 4) the crystal filters follow absolutely standard practice. They have low impedance inputs and outputs. Many variations of these filters can be made. The use of lower frequency crystals and the use of two in a band-pass circuit quickly come to mind. However, the author was interested in using components on hand and which could be easily duplicated.

The high frequency side band is used because to get the rejection notch on the low frequency side, the capacity of the phasing condensers had to be increased, whereas to get the low frequency sideband, one had to decrease the capacity of the phasing condensers. This always left a minimum capacity about which nothing can be done, and was not happy that the rejection notch was in as close as it could be got.

Using this principle, a S.S.S.C. transmitter has been built and put into operation and has given very satisfactory results. It uses nothing but junk parts, costs a minimum, needs very little lining up, and can be duplicated by anybody interested. The author is sure that it will be the standard type for Amateur use in the near future. If

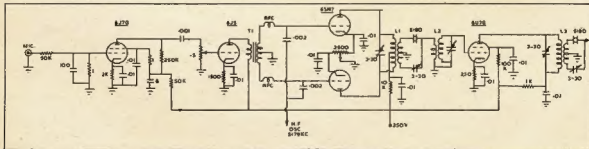


Fig. 4.—Diagram of two stage audio amplifier, balanced modulator and crystal filter single sideband stages. The present h.f. oscillator is a Clapp, to be replaced by a crystal oscillator on 5179 Kc.



# Maxwell's Outstanding Value. Huge Purchase

Adjustable Stop and Start. This mechanism is adjustable for all types of pick-ups. Brand New. Boxed and guaranteed. Induction Motor, variable speed 12" Turntable. Special quote for lots of six or more.

AUTOMATIC  
STOP & START

## MARMAC MOTORS

12 inch  
TURNTABLE



SPEED  
REGULATOR

PRICE **79/6**  
AT . . .

220/240  
VOLT INPUT

Same Day Despatch.  
Add Postage to all amounts.

# MAXWELL'S RADIO

48 ELIZABETH ST., MELB.

Phone: Central 4913



## QSL CARDS

The DEE WHY PRINTING WORKS is making available to the Amateur Experimenter a Special QSL Card Printing Service. Knowing the requirements of Hams, we are confident the service offered will be unsurpassed in Australia.

Cards can be printed to your own specifications, and if illustrations or blocks are necessary, our Art Department can produce these for you.

- \* The Ham specially catered for.
- \* Quality Cards at economical prices.
- \* Prompt Service.
- \* One, two or three colours if required.
- \* Interstate orders handled.

## Dee Why Printing Works

67 HOWARD AVENUE, DEE WHY, SYDNEY.  
Telephone: XW 8367.

Proprietor: GEOFFREY BOWER





# Screen Modulation with Audio Controlled Carrier

BY A. W. N. SOBEY,\* VK5VO

CRYSTAL FILTER S.S.S.C.

(Continued from Page 4)

## LINING UP

The audio amplifier is checked in the usual way. That presents no difficulties. The next thing is to put one of the crystals in a Pierce oscillator and line up the coils in the filter unit. The receiver S meter is used for this.

Put a crystal of any frequency in the holder of the filter from which the crystal was taken to use as the test oscillator. If you have three crystals all is well.

So far you don't worry about balancing the carrier out. In fact that is just what you do not do. The next step is to replace the crystal you took to put in the oscillator and take your "Clapp" oscillator and vary the frequency slightly around the crystal frequencies. What you are trying to do next is set your rejection notch as close in as you can to give you a very steep side. This is quite a simple procedure as the rejection notch is very definite.

When the filter is set with as steep a side as possible, adjust the carrier half way up it and then peak up all the circuits in the filter. Now by varying the potentiometer in the cathodes of the 6SN7GT, it will be possible to balance out the carrier. Then we have no carrier and only one side band. As stated previously, the high frequency side band is used. The original article suggested 100 pF. for the phasing condensers, but Philips' concentrics were used for the mechanics and shielding.

From this stage on, it is just a matter of feeding in your other frequency and tuning up your amplifiers which need no further elaboration as we all do it in receivers and transmitters.

The original article stated that for maximum rejection it was necessary for the two filter crystals to be exactly the same. They padded them with capacity to do this. The writer's crystals are about 100 cycles apart but it does not seem to matter. No provision is made here for putting any carrier in, other than what gets through.

Quite a full description of crystal filter working is to be seen in the R.S.G.B. Handbook. Articles on the filter type transmitter are to be found in "QST" for January 1948 and March 1949, and "Amateur Radio" for August 1949. The original article in the "Short Wave Magazine" for July would well repay anybody who is thinking of getting going.

In this project the writer has been helped by quite a few, and wishes to acknowledge their aid, especially the following: VKs 2ABE, 2ABH, 2NO, 2ALX, 2JW, and 2YC. This is by far the simplest system seen to date. It is not difficult to get going and certainly gives the results. The only link up tools used were the receiver, "Clapp" v.i.o., a pair of headphones, and a multimeter. The impedance of anything in the whole thing is unknown, but it is known that no carrier and only one side band is present. For anybody interested, this system is put forward as the simplest method for getting started on this new system, which has advantages not to be passed over lightly. Once the filter unit is built, it is a simple job to put it on any band you like.

The following was evolved in a hunt for an economical and efficient system of modulation. The basic circuit was taken from an American periodical. The title was decided on because of the reduction of carrier when no modulation was taking place.

The transmitter is an AT5 with 807s in parallel in the final, running 85 watts input under c.w. conditions. The adjustments for phone operation consist of tuning up the transmitter for c.w. operation with the excitation adjusted for maximum, with the modulator switched off. Once the transmitter has been tuned for maximum output, no further adjustments are necessary (i.e. excitation is not touched again).

Next the modulator is switched on and it will be noticed that the plate input will drop to about 25 watts with no modulation; on modulation peaks the input reached 75 watts.

The gain control, R2, is then adjusted for 100% modulation. R1, when using single button carbon microphone, is then adjusted for best quality, too much current through microphone will cause packing of granules. When R2 is set at over 100% modulation, the quality starts to become rough and only splatters when set considerably in advance of 100% modulation. As the audio voltage is not superimposed on the d.c. screen voltage (as in transformer coupling), the risk of over-modulation is reduced.

The reports on quality of transmissions have been very flattering. A feature of the system is the fact that there are no transformers and it is not necessary to worry about impedance matching or excitation.

Reports received from VK6, VK5, VK3 and VK2 have averaged R5 S7-9 consistently. R5 S5 was obtained from VK3 at midday under adverse conditions on 40 metres during the R.D. Contest.

With plate modulation, the station was troubled with b.c.; this system of modulation eliminated b.c.

The 6L6 modulator tube has the plate and screen tied together and the plate

is connected to the screen supply of the r.f. final; the modulator switch, S1, is in the cathode of the modulator tube and when opened, the transmitter functions normally for c.w. operation. On closing S1 the modulator is brought automatically into operation.

A rectified audio voltage is supplied from the diodes of the 6SQ7, this supplies a bias to the grid of the 6L6 which varies the plate current of the final according to the bias supplied. When no bias is received at the grid of the 6L6, it draws current, thus lowering the screen voltage of the final and reducing the carrier. On commencing to speak bias is supplied, this allows normal voltage on the screens of the final, thus restoring the carrier.

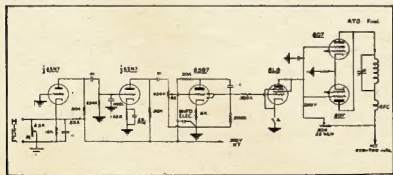
The rest of the modulator follows standard practice, viz.: Single button carbon microphone in the cathode of half an 6SN7, the other half is a triode amplifier connected to the grid of the 6SQ7. Rectified audio is then supplied from the diode plates of the 6SQ7 to the grid of the 6L6. The rectified audio is the essential component in the modulator. A 6L6, 6V6 or preferably a 6Y6 on account of its lower plate resistance can be used. The front end may be modified for any type of microphone.

The efficiency compared with the c.w. operation appears to be 86% (85 watts c.w. 75 watts phone) on actual operating figures at this station, thus comparing favourably with plate and screen modulation, although I do not claim that it will take its place. Other forms of efficiency modulation have been tried and it is far superior to these.

Push-pull, parallel or single ended stages may be modulated by these means. Inputs from 50 watts up to any power the Amateur is permitted, or likely to use, can be modulated by these means.

This article was written mainly to give the newcomer to Amateur Radio a cheap, efficient form of modulation easy to adjust and with reasonable care in adjustments, less likely to give broad or splattering signals. It will also give the experienced Amateur further grounds for experimentation.

\* 21 Fern Avenue, Fullarton, South Aus.



# Abstracts from Overseas Magazines

R.S.G.B. "BULLETIN," SEPTEMBER, 1949

P. 88: "A Six-Element Aerial Array for the V.H.F.s." F. Charnon, G6CJ, and H. E. Smith, G8CJ.—The horizontal centred full-wave elements (i.e. six half-wave elements) with half-wave vertical spacing. Low angle radiation with broad horizontal pattern.

P. 89: "Correlation of Sporadic E Occurrence with Noise received on Two Metres." D. W. Heightman, G8DH.—Suggestion that Sporadic E clouds may be located by the direction of maximum noise on two metres.

P. 90: "A New Constructed Impedance Bridge." D. P. C. Thackeray.—Three valve bridge can measure wide range of reactance, capacity, inductance and power factor.

P. 91: "An inexpensive V.F.O. and Exciter Unit." S. A. Denry, G8CML.—Good conversion of TU5B tuning unit.

R.S.G.B. "BULLETIN," NOVEMBER, 1949

P. 138: "Clippers-Filter Systems." H. Whalley, G8HW.—Good discussion on what clippers can and can't do with hints on getting the most from them.

P. 141: "A Crystal Checked Frequency Meter." J. N. Walker, G8JU.—Franklin V.F.O. with 100 Kc. check oscillator.

P. 150: "The President's Trophies' Transmitters." P. Pike, G8EN.—Push pull grounded grid oscillator for 420 Mc. using two 3A/147K (CV82) triodes. Input 20 watts. The "President's Trophies" were for the first 420 Mc. contact between fixed stations, more than 25 miles apart and was won on 12th August, 1949.

R.S.G.B. "BULLETIN," DECEMBER, 1949

P. 178: "Single Side-Band Transmission Applied to Amateur Telephony." N. G. Hyde.—Part One, a review of s.s.b. transmission systems.

P. 180: "The Design of Yagi Aerials." J. H. W.—Optimum dimensions for Yagi's with various numbers of subelements and directors.

P. 181: "A Portable Transmitter and Receiver." A. O. Milne, G8ML.—Dry battery receiver and transmitter for 1.7 and 2.5 Mc.

P. 184: "Improving Receiver Sensitivity." A. G. Wood, G8RZ.—50— for 14 Mc.

P. 186: "Why Not a Windmill?" E. Johnson, G8HR.—How to cut antenna and match single line feeder for Windmill antenna.

"CQ," FEBRUARY, 1950

P. 10: "A Medium Power Transmitter of General Utility." M. P. Johnson.—225 watts to 2400.

P. 16: "A Slightly Different High Voltage Supply." E. Black, W2EN0.—Bridge rectifier circuit using 825 high vacuum rectifiers, give 2,500 v.

P. 18: "Putting Surplus to Work on the 420 Mc. Ham Band." T. R. Davis.—Conversion of APQ-9 radar jammer. Originally operated between 500 and 700 Mc. using push pull 8012A.

P. 24: "A High Power Modulator for Mobile Operation." G. M. Brown, W8CVV.—Class B 807 triodes driven by direct coupled cathode follower 6SN7. Lowers standing drain, yet higher output than 6N7 Class B modulator.

P. 24: "Stabilising the V.F.O." C. A. West, W21YG.—Stabilising the BC598.

P. 28: "Black and White." (i) Automatic sweeping receiver control. (ii) Key-controlled transmitter. (iii) Antenna tuner from BC375E. (iv) Spot frequency c.w.m.-n.b.l.m.

"QST," FEBRUARY, 1950

P. 11: "A Solution to the Keyed V.F.O. Problem." R. M. Smith, W1FTX.—Fundamental frequency of v.f.o. is one quarter of operating frequency. Amplifier after v.f.o. operated at low level and strictly Class A to eliminate fourth harmonic when harmonic amplifier is keyed.

P. 26: "The Band Antenna-Matching Networks." Part II; J. G. Marshall, W0ARL.

## CAN YOU OBLIGE?

A letter is to hand from R. B. Moncrie, of Zenag, via Lae, New Guinea, asking for details of the Receiver type BC348 series "O". If any reader can forward a complete circuit diagram, including values and voltages, he would be very grateful.

Unfortunately, when this type of receiver has been written up in overseas magazines, only sections of the circuit have been shown and he has been unable to get complete details.

P. 16: "A Simple Non-Directional Antenna for Ten Metres." S. Becker, W7ATB.—Vertical J antenna.

P. 18: "Your BC221 as an Audio Signal Generator." C. E. Vogt, W8XCO.—Uses audio beat at 1000 Kc. check point.

P. 19: "Eliminating TVI with Low Pass Filters." G. Grammer, W1DF.

P. 27: "A Two-Metre Station for the Novice." Part I, the Receiver; E. P. Tilton, W1HDQ.—6J6 mixer-oscillator, 6AK5 first L.F. amplifier to feed communication receiver on 7.4 or 16.7 Mc.

P. 32: "Hints and Kinks."—(i) Combined output control and screen protection circuit. (ii) Another neutralising kink for 813A. (iii) Sockets for 15E tubes.

P. 34: "Technical Topics."—(i) Re Half Wave Filters. (ii) Gimmicks and Gadgets.

"SHORT WAVE MAGAZINE," JANUARY, 1950

P. 818: "Band Switch QRO Transmitter." J. N. Walker, G8JU.—Uses standard British components with 813 final.

P. 828: "Suppression of TVI." Part II; F. T. Wilson, G2IX.

P. 832: "Experiments with Scale Model Aerials." F. C. Judd, G8BCX.—Measurements of gain and radiation pattern for 144 Mc. models of more than 20 types of aerials used on lower frequency bands.

P. 839: "Better Class Oscillator." R. S. J. Smith, G2BCL.—Constant output with increased frequency coverage by adding a small ganged condenser from the top of the coil to earth.

P. 842: "Country List by Prefixes."

P. 851: "The Versatile BC357." V. J. Copley, G3AAG.—Marker beacon receiver which operates a very sensitive relay on receiving a modulated signal.

P. 853: "Modulating the Screen." H. J. Beach, G8BBO.

## At Last! A Universal CRYSTAL MICROPHONE

The Microphone you have been waiting for.



- For Hand Operation.
- Stand or Desk Mount Receptacle.
- Pleasing Appearance.
- High Output.
- Excellent Quality.

Price £4-17-6 Nett to Amateurs  
Retail £6-5-0.

Desk Stands to suit, 9/- & 14/9.

IMMEDIATE DELIVERY TO ALL STATES  
(Country and Interstate Clients please add exchange and postage.)

## CHECK THESE TECHNICAL DETAILS—

- ★ Imported diaphragm-actuated Crystal Insert.
- ★ Grid input 1 to 5 Megohms.
- ★ All Crystals used are dipped in a 100% water and water vapour resistant coating.
- ★ Outer casing made from high grade re-inforced Plastic.
- ★ Low feedback level and no cavity resonance with this unique design.
- ★ Imported flexible corded rayon shielded cable.
- ★ Fits all types of Stands, 1" to 2" t.p.i.
- ★ Ideal for use with Wire Recorders, Amplifiers, Cine Equipment, Public Address Systems, and Modulation Equipment for Amateur Transmitters.

Distributors for Eddystone and Belling Lee.

**WILLIAM WILLIS & CO. PTY. LTD.**

428 BOURKE STREET, MELBOURNE, C.I. Phone: MU 2426

Established over 80 Years.

# Rules of the Australian DX Century Club Award

# IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

JUNE, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

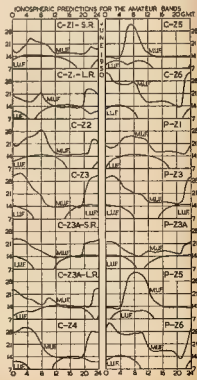
The Perth charts are similar to those based on Canberra.

## QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1400 hours G.M.T.?
2. Was the 14 Mc. band workable between 1000 and 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



9. Each confirmation submitted must show the date of contact, type of emission used and the report. The band used and the address of the station is also desirable, but not necessarily essential.

10. Confirmations must be submitted exactly as received from the station contacted, and altered or forged confirmations will be grounds for disqualification.

11. Out-of-band operation used to contact a station will result in disqualification and be retrospective in the case of members.

12. All stations must be contacted from the same Australian call area and by the same licensee, although if the call sign is subsequently changed, contacts will be allowed if still within the original call area, and by original licensee.

13. Confirmations submitted which show both phone and c.w. reports may be accepted for both sections if the dates of each contact is shown, and emission is indicated.

14. Should a country be deleted from the Official Countries List at any time, members and intending applicants will be credited with such country if the date of contact is before the date of such deletion.

15. Certificates will be issued for "All Phone," "All C.W.," and "Open" contacts with a hundred countries, and stickers will be subsequently issued for each additional twenty countries confirmed over the one hundred.

16. Successful applicants will be listed monthly in "Amateur Radio." Subsequent to the first application, members must submit additional confirmations not less than five at any one time, for additional credit.

17. Applicants for membership shall be addressed to the "Federal Secretary, Box 2611W, G.P.O., Melbourne," and accompanied by sufficient postage for return by registered mail. Confirmations must also be accompanied by a list of claimed countries and stations, showing relevant details or explanation against stations where necessary.

18. Confirmations shall be examined by the Awards Committee, consisting of the Federal QSL Manager, the Federal Traffic Manager, and the Federal Secretary, who shall, if satisfied that the applicant is eligible for membership in accordance with these Rules, arrange for the member to be listed under the appropriate section in "Amateur Radio."

19. The decisions of the Awards Committee shall be final and binding in respect of any matter pertaining to these rules.

Members please Note! Have your . . .

## MAGAZINES BOUND INTO BOOK FORM

at reasonable charge. Contact R. Laffy, 29 Addison Street, Moonee Ponds, Vic.

Bookbinder.

## A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 13th July, 1950. Lectures are held on Monday and Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with Secretary W.I.A., Victorian Division, 191 Queen St., Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

# TRIMAX

SELECTED BY GOVT. DEPARTMENTS  
AND LEADING RADIO STATIONS!!!

"TRIMAX" high fidelity, low level transformers feature excellent frequency characteristics, low distortion, minimum transfer of longitudinal currents, low hum pick up. Also available in high permeability multi shielded case for extra low level operation.

## TRIMAX TRANSFORMERS

(CLIFF & BUNTING PTY. LTD.)  
CHARLES ST., NORTH COBURG  
Telegraphic Address: "Trimax" Melbourne.



With improved production facilities most types are now available from stock. A standard range sufficient for most applications is listed in leaflet 47-1. If you do not have a copy, please write.

# Transformers

N.S.W.  
Qld. Radio Equipment Pty Ltd. Tas. W & G. Genders Pty Ltd.  
Chandler Pty. Ltd. John Martin Pty Ltd.

South Aust.  
A. G. Healing Ltd.  
Gerard & Goodman Pty. Ltd.  
Radio Electric Wholesalers Ltd

W.A.  
Nicholson Limited.  
Atkins (W.A.) Ltd.  
Carlyle & Company Ltd.

Have you obtained your copies of . . .

## 1950 EDITION A.R.R.L. RADIO AMATEUR HANDBOOK

The standard manual of Amateur Radio Communication. Price 24/6, and 1/1 post.

## 12th EDITION RADIO HANDBOOK

Contains a host of new chapters for Radio Enthusiasts. Price 34/6, and 9d. post.

(Add exchange to Country and Interstate Cheques.)

Large Range of Technical Books, Stationery and Novels on Display.

Mail Orders by Return Post.

## McGill's Authorised Newsagency

183-185 ELIZABETH STREET, MELBOURNE, C.I, VICTORIA.

(The G.P.O. is opposite)

Phones: M 1475-76-77

# N.S.W. Div. North Coast Zone Convention at Urunga

By BOB LONG (VK2MM) and DAVE EVANS (VK2AYE)

After months of hard work and publicity on the part of the North Coast Zone Committee, the first rumblings of the good time to come were heralded by the arrival of VK2MM on the 28th March after working mobile on the trip with a No. 11. Bob qualified for the prize given to the first to arrive and unkind contemporaries claim that Bob, after a survey of the scene on arrival, decided to award a trophy for the event. Next on the scene was VK2KR, the world's champion yabbie catcher, complete with a portable refrigerator (contents not divulged) and his stamping outfit for the comp. Immediately on arrival, Cec went into strenuous training for the event, but was disconcerted when told that other fellows had been putting in a bit of quiet practice at their home beaches. Cec then gave it away and retired to the "Do Me" shack to conduct a fraternal with VK2ARY and VK2AAP who had arrived hard on his heels.

From this stage there was a continual show of hand-shaking, gum-lashing and ear-bashing as Hams converged on Urunga by train, truck, car and plane and had to be introduced to their earlier arrived friends. To adopt that trite and time honoured phrase—"among those present" were VKs 2AAM, 2AAN plus YL, 2AAP and YF, 2ACU and YF and brother-in-law, 2ADE, 2ADN, 2AEU, 2AEY and harmonic, 2AGD, 2AGM and YF, 2AHA, 2AJB, 2AJT, 2ALB, 2AMJ and father, 2ANA, 2ARJ, 2ARY, 2ASF, 2AWS, 2AWG, 2AYE, 2CM, 2DK and YF and harmonic, 2DK, 2EA, 2GT, 2JC and YF and family, 2JR, 2JK, 2KR, 2LH, and family, 2MM, 2OE, 2PA, 2RK and YF, 2TL and YF, 2UC, 2UY, 2WQ, 2WT, and YF, 2XO and YF and harmonic, 2XY, 2ZS, 4CU and YF, 4CZ and YF, 4ST, 4UX, 4TY, and 4XP.

Other visitors who contributed to the success of the "do" were Mr. Charles Eddy, Chairman of the Urunga Progress Association; Mr. Ted Hamey and YF, and the radio wonder boy (Ian), and Mr. Percy Sara, Superintendent, Beltingen Ambulance Station.

The North Coast Zone Committee wish to thank the townspeople of Urunga for their ready and willing co-operation in assuring the success of the Convention and, in particular, wish to convey their thanks to the following organisations, whose activities never left a dull moment throughout the holiday period:

Urunga Progress Association,  
Beltingen-Urunga Surf Club,  
Beltingen Shire Council and Chamber of Commerce,  
Beltinger River Am. Anglers' Club,  
Urunga Football Club.

A special vote of thanks is due to the Gleeson brothers and their manager, Theo, whose particular job as hosts to the visitors at the Ocean View Hotel was accomplished with a cheerful demeanour and alacrity totally unknown in metropolitan hostellers. For the benefit of those who intend to make the trip next year, it may be mentioned

that the abovementioned gentlemen have reserved all the accommodation in the hotel for Hams and their friends. And it seems that Theo, after hearing 2AYE operating in his room in the hotel, has been bitten by the virus and is already on Crieff Retaillick's back for a Ham ticket!

A dismal report from Baron Hugo Stitt, 2WH, that the Forbes gang would be unable to attend the fest dampened spirits a little—according to Hugo, conditions were so bad that Army "ducks" were unable to battle against the swirling currents. Better luck next year, chaps. While on the subject of floods, mention should be made of the effort of 2ACU, who had to detour so much that he covered 630 miles to reach Urunga. For 18 miles of this distance in the flood areas, his truck was carried piggy-back on a huge Deisel tractor while Rod bemoaned the fact that he was unable to use his motor-scooter which he carried as secondary transport.

Good Friday was spent in getting acquainted and resting up after the trip in readiness for the strenuous programme which Crieff and his stalwarts had planned. The main item of interest on Good Friday was the arrival of the 18 water (two 9's in a common envelope) and its installation, with anxious care into its appropriate rack assembly. 2DK had donated a spring lamb for the boys who were "batching" at the "Do Me" shack and the job of folding it up to fit into the refrigerator was deputised to one Robert Long. Bob's efforts to carve dead mutton into succulent joints with a rusty, blunt fish knife earned him the title of "Mutton Mangler," of which he may be justifiably proud for no cannibal ever mangled a prospective victim more successfully or thoroughly.

## COMPETITIONS

The Convention proper commenced at 2 p.m. on Saturday when all Amateurs congregated at the "Do Me" shack for registration and issue of identification discs. The unusual course was then followed of having all Amateurs announce their name, call sign and their particular pursuits in radio. The banana guessing competition, for a huge bunch of bananas, donated by Ted Hamey, the "Banana King" of Coff's Harbour, was won by 2WQ, who guessed the exact weight of 80 pounds. Entries ranged from 32 to 173 pounds and the result indicated good surveying on Bob's part. As a token of their esteem and to mark his success, the boys left him one banana on the stalk.

The code test at 20/25 w.p.m. was won by 4XP with a score of 75 out of 78, with 2JR a close second in the event.

In the voice identification test, 2PA, played back fifteen voices which he had recorded from QSOs on the 7 Mc. band. 2KR and 2AHA tied for first place. This success obviously indicates that these two boys are, at least, good listeners on 40 metres. Much to his chagrin, 2XO,

for the second year in succession, failed to pick his own voice in the recording.

Next event was the neutralisation of the 18 water—a task to which the boys, and some of the YFs, paid strict attention. The boys did their job nobly, but failed to achieve complete neutralisation and, as a punishment, were ordered to work back on the job that evening after lectures were completed.

Photographs then became the order of the day and quite a large number were taken. Joe Reed made a series of snaps, copies of which are now doing the rounds, and which can be obtained from Joe at a nominal cost and which provide a most attractive and pleasant memory of an eventful Convention.

## LECTURES IN THE EVENING

So to dinner, to fortify the inner man against the attacks of the lecturers who were billed to go "over the top" at 8 p.m. At this session, 2MM was the first lecturer and he rendered a masterly dissertation on "Characteristics, Uses and Abuses of Meters." He was followed by 2ADE, who discoursed on "The Conversion of the SCR522 to 50 and 144 Mc" in a manner which left no doubt that Charlie really knew the works. Next on the rostrum was 2EA, who managed to interpolate humour into his lecture in an enterprising way which did not detract from the interest in his talk on "Super Modulation." 2ADT, who was booked for a lecture on "Turret Tuned Receivers," was unable to be present due to illness in his family, and Jack's place was taken by 2ARJ who really did justice to a discussion on "Double Conversion in Receivers," which was notable for the fact that Jim had come totally unprepared to deliver a lecture and did not use any notes.

We take advantage of this opportunity to remind our lecturers that they promised to forward scripts and clippings of their lectures to 2AYE for publication in "Amateur Radio" and it would be much appreciated if the scripts could be forwarded as soon as possible to the Institute P.O. Box 1734, Sydney.

2AYE was then called upon to respond for the Council and Institute. In his remarks, Dave stressed the importance of loyalty to the Institute and the encouragement of the younger element in the study of Amateur Radio, the maintaining of the country Amateurs' interest and the desire of the Council to decentralise activities as much as possible. He complimented the North Coast Zone Amateurs on the accomplishment of what was possibly the most outstanding Ham event in the history of the Division and suggested that this was an appropriate time to appoint a working committee to commence organisation for the next Convention.

At this stage, 2JC, the able Chairman, got into his stride and within fifteen minutes a committee was elected and were "rarin' to go." Present aim of



the committee is to have 250 Amateurs at Urunga next Easter and at the time of writing, over sixty have signified their intention of attending. If you want to go, contact Crieff Retallick as soon as possible or you'll be out of luck for accommodation. Next year's Urunga "do" will be the "best ever," as the "mugger mangler" expresses it: "bigger, better, breezier and brighter than ever."

### FAMOUS YABBIE CATCHER

Sunday, 9 a.m., saw the start of the great yabbie catching competition and the entire population of Urunga and their visitors were soon elbowing for standing room on the side lines while the competitors were nervously treading water with a few practice stamps and quietly jockeying for good positions. The champ, Cec Hardman, eyed them belligerently and picked himself a weed-covered spot some twelve feet away from the upstarts who coveted his title.

On the signal from the judge, all competitors were rapidly stamping out a furious rumba, churning water and sand into a boiling maelstrom, to the accompaniment of clicking camera shutters and the derisive cheers of the harmonics who thought that the OM really had gone nuts this time.

When a halt was called, the exhausted title-seekers had not one solitary yabbie between them and Cec nonchalantly approached the judges and tossed at their feet ten emaciated and nearly defunct yabbies. Well, a yabbie, dead or alive, is a yabbie, so Cec was adjudged world's champion and was invested with his badge of title and presented with a beautiful miniature gold pot. While Cec was enjoying his brief moment of adulation his opponents, who suspected foul work and had ready memories of the portable refrigerator, decided that Cec had used last year's yabbies to take the title and in an irate, and none-too-gentle manner, seized the protesting champ, carried him out to deep water, and tossed him in to fraternise with his yabbies.

From 10 a.m. to noon a bus tour for the Hams, YLs and YFs was provided by the people of Urunga and a most enjoyable tour of the Bellinger River Valley followed. Those who could not find a foot-hold, retired to the "Do Me" shack to listen to the W.I.A. broadcast and compare notes.

### HIDDEN TRANSMITTER HUNT

At 2 p.m. the search for the hidden transmitter was organised. Unfortunately, there were only two entrants and this event was won by 2AYE who sat in the hotel lounge discussing matters of moment with 2JC, while 2ASF, who incidentally had never before handled 144 Mc. gear, went out and brought home the bacon. Good work, Col, and may you have that 832 in operation next year.

The beam used by 2AYE consisted of a 300 ohm telcon dipole with reflector and director spaced half wavelengths, the latter consisting of two pieces of quarter inch brass rod and horizontally polarised. The back-to-front ratio of this "stick and string special" is 26 db. Incidentally, the finish of the transmitter

search was dramatic, 2ASF locating the transmitter just about ten yards ahead of his rival 2AHA. Better luck next time, Harold. It is hoped that the Sydney V.H.F. Section and associated Clubs will send up a strong group next year. The Newcastle boys already claim that they have it all sewn up.

### PRESENTATION OF PRIZES

At 7.30 p.m. all hands retired to the School of Arts where, under the Chairmanship of 2JC, we received a speech of welcome from Mr. Charles Eddy, President of the Urunga Progress Association. In his remarks, Mr. Eddy stressed the good work done by Amateurs in times of distress and the pleasure that the townspeople derived from the fact that Urunga had been chosen as the scene of our Convention. He promised, in advance, to again turn over the town to the boys next Easter. Mr. Eddy's remarks were received in the usual enthusiastic manner.

The presentation of prizes was then commenced, the duty being ably performed by 2AAN, Hon. General Secretary of the Division. Complete presentation was as under—

1. Banana weight guessing—Bob Wilkins, 2WQ.
2. Code test—1st: Jeff Thompson, 4XP; 2nd: Joe Reed, 2JR.
3. Voice identification—tie between Cec Hardman, 2KR, and Harold White, 2AHA.
4. Fishing competition—Bill Eagling, 2AEV.
5. First to arrive at Convention—Bob Long, 2MM.
6. Travelled longest distance to Convention—Rod Pike, 2ACU.
7. Hidden transmitter hunt—Dave Evans, 2AYE, who called up the real winner, Col Fletcher, 2ASF.
8. World's champion yabbie catcher, gold pot and certificate—Cec Hardman, 2KR.
9. Ear bashers' award—1st: Gordon Kempton, 2CI, subject "Be Kind To Horses," time 22 min. 35 sec.; 2nd: Joe Reed, 2JR, subject "The Joe Reed Oscillator," time 22 min. 34 sec.
10. Lucky number on registration disc—Gerry Chandler, 2ZS.
11. Lucky number on registration, ladies—YF of 2AAP, Mrs. Hart.
12. Lucky number on programme—Miss Lindsay Hewitt.
13. Certificate of commendation—Ian Hamey, Radio Wonder Boy.

A few remarks are justified in connection with the prize-giving. The prize for event No. 8 was 500 QSL cards, donated by that grand old friend of the boys, Ern Ashley, of North Bondi. Ern also donated 1,000 QSL cards for the prize in event No. 10, and the boys certainly appreciate your gesture Ern. Many thanks, old timer. Incidentally, to those hundreds of Hams who still have to attain that signal honour of a card from 2ZS, we suggest that you set on bus back immediately. Gerry, at the time of writing, has never seen his name in print—except on police warrants and other blokes' cards.

Prize giving was followed by a demonstration by the radio wonder boy, four-year-old Ian Hamey. Joe Reed was

invited to draw any circuit on the blackboard and to question Ian regarding the components. Joe chose an old circuit of the 1930 vintage—the ST300 we believe—and the boy was able to answer all questions satisfactorily. His designations for some parts were not exactly the same as those in the "Designer's Handbook," but his replies definitely could be accepted as indicating a fair knowledge of components. 2ADN then described a power supply and leaving out an important connection, he asked Ian if the circuit would work. Ian laughed and said, "Of course not, you forgot the centre tap in the secondary."

Next item was an hour of 16 mm. films by Ted Hamey. Ted is a photographer of note and his coloured documentaries have to be seen to be believed. As a show they rated as good as anything we have seen in the City, one in particular which described the activities of the banana growers should have a wider circulation.

The next item was the star show of the Convention and was a lecture by Joe Reed, 2JR, on "Model Radiator Investigations on Low-Angle Radiation." As is usual with Joe, his racy style of delivery and interpolated Ham style of humour, held the interest of the boys completely. At the conclusion of the lecture, a vote of thanks was accorded Joe by 2AYE and carried enthusiastically. One noteworthy point about the lecturers at the Convention was that they did not introduce involved mathematical formulae—which always bore and rarely enlighten—but held the interest of their listeners by adapting Ham practice and keeping to phrases and terms which were readily understood and easily digested.

Before concluding this report we feel that mention must be made of the "mad hour"—1600 to 1700 hours on Sunday—when all the chaps with portable rigs tied up a "long distance contact contest" to publicise the Urunga Convention. As is usually the case with unofficial contests, nobody seemed to keep a log, nobody seemed to be quite sure whether the contest was on or not, so, just for the fun of it and to keep faith with the boys down south, who had promised their co-operation, a few of the chaps turned the 40 metre band into a madhouse for sixty minutes. 2AYE managed to contact Bondi, 2AAN beat him by ten miles by connecting with Sutherland and 2KR went out after XEs and Ws, only to find that somebody had "fixed" his automatic key for him. 2DK turned it in—the Urunga QRM was terrific. Anyhow fellows, it will be on next year—in earnest—properly organised and out in the field.

To the ladies who assisted in the Convention we extend our sincere thanks, they are so many that it is impossible to pick individuals. To the various Associations in the district who contributed to the pleasures of our stay, we say thanks a lot, folks, we liked it so much we'll be back for more next year, and to the chaps who organised the "do," well, we guess you know how the fellows feel about it. Well, that's it, blokes, just one more crack before we throw the big switch—we'll be seeing you at Urunga next Easter, for the biggest, brightest, breeziest, Convention ever.



Mr. R. H. Cunningham using the "750" at the Eddystone Ham Shack

## A Fine British-Made Communications Receiver of Advanced Design and First-Class Construction

The new Eddystone "750" Receiver employs the latest technique in double superheterodyne circuits and combines high selectivity and sensitivity with excellent signal-to-noise ratio. The tuning range is continuous from 32 Mc to 480 Kc, except for a small gap around the first intermediate frequency of 1620 Kc. The horizontal scales on the unusually wide, full vision dial are calibrated in frequency, these calibrations all being linear. The tuning mechanism is a fine example of precision engineering. It incorporates a flywheel loaded high reduction ratio gearing and an auxiliary vernier tuning scale which gives adequate bandspread. Separate RF, IF, and AF gain controls combined with selectivity variable over wide limits, ensure maximum performance under all conditions of operation.

### Australian Representatives:

**R. H. CUNNINGHAM PTY. LTD.**  
62 STANHOPE STREET,  
MALVERN, VICTORIA

### Further Details from:—

VICTORIA: J. H. MAGRATH & CO., 208 Little  
Lonsdale Street, Melbourne.  
WILLIAM WILLIS & CO., 428 Bourke St., Melb.  
N.S.W.: JOHN MARTIN PTY. LTD., 116-118  
Clarence Street, Sydney.  
WESTERN AUST. CARLYLE & CO. LTD., Hay  
St., Perth, and 397 Hannan St., Kalbarria.  
ATKINS (WA.) LTD., 894 Hay Street, Perth.

QUEENSLAND: CHANDLERS PTY. LTD., Cr.  
Albert and Charlotte Streets, Brisbane.  
SOUTH AUST. GERARD & GOODMAN LTD.,  
192-196 Rundle Street, Adelaide.  
TAS. W & G. GENDERS PTY. LTD., 63 Cam-  
eron St. Launceston; Liverpool St., Hobart.  
LAWRENCE & HANSON (ELECTRICAL) PTY.  
LTD., 120 Colling Street, Hobart.  
HOYES BROS. LTD., 36 Argyle Street, Hobart.

# Twentieth Annual Federal Convention of the W.I.A.

## Federal Executive's Annual Report

### PRESIDENT'S REPORT

In presenting this report it gives me much pleasure to record the progress made in all grades of membership, which now stands at 2263 as compared with 1166 at this time last year. Although this increase is not very large, it indicates that the Institute has not merely held its ground, but has advanced in the consolidation of membership in the States. It is a large step, and it is still a big field for Divisional Councils' attention, namely the development of Associate Members to active transmitting membership in the coming year.

Our relations with the Postmaster General's Department have been maintained on the customary friendly basis, and although so very excellent problems have arisen during the year, many misapprehensions have been satisfactorily adjusted.

Considerable effort has been made this year to indicate to the P.M.G. the Institute's interest in the elimination of overseas commercial stations straying into the Amateur bands and a considerable number of reports from listeners throughout the Commonwealth have been filed with the Department to illustrate the seriousness of the situation. This year, many opportunities have occurred for Australia to participate in National Emergencies, and some excellent work has been carried out by those who were equipped for this purpose.

Every effort should be made by Divisional Councils to encourage members in the construction of suitable equipment for this work. The Contest Committee has carried out his duties most effectively, and we feel that all members have enjoyed the contests which have been arranged. It was most unfortunate that the 1949 W.Z.L. Contest, in which the Institute's interest was so keenly felt, was cancelled. It is hoped that arrangements can be made with the appropriate authorities in New Zealand so that next year will not be so.

This year has seen the finalisation of the Rules for the W.A.S. (Australia) Award (which is the Award offered for work done in the States, Territories and the Northern Territory on 80 Mc. or higher bands). There has been increased activity on the bands from 35 Mc. upwards since early 1949, and this has been helped by the introduction of a simple equipment on which much original constructional work has been done.

Federal stations have been carrying out the S.S.C. technique and a number of members have been carrying out experiments on narrow band f.m.

Following the action by the Federal Council in laying down the rules for the setting up of number clubs throughout the W.I.A., a number of such clubs have been formed. This move has had the effect of strengthening the ties between areas where attendance at Institute meetings is difficult.

The usual work falling on Federal Executive Officers has been carried out very effectively. The Federal Secretary having handled 776 letters this year as against 688 letters for the same period last year. Twenty-two Federal Executive meetings have been held throughout the period, and all members have shown great interest in the work. The Federal QSL Manager handled 3,786 in 1948-49. Cards now work out at 3.85 per 100 cards as compared with 3.75 last year and 3.46 in 1947-48. The Federal QSL Manager, Mr. R. E. Jones, has been ably assisted by Mr. Les Jackson. A total of 38 applications for W.A.C. and W.B.E. Certificates was handled during the year.

It is pleasing to note that the Magazine "Amateur Radio" being published so successfully, and the Committee members are to be commended on their efforts in handling its finances so well.

I take pleasure in extending my thanks to the Federal Secretary, the Federal Treasurer, and the Federal Publicity Manager, together with all other Federal Officers who have so capably assisted me in the work of the Executive throughout the year.

We are sorry to announce the resignation of the Federal Secretary, Mr. W. Mitchell, who is going abroad. Mr. Max Hall will be the new Federal Secretary, and we extend a very cordial welcome to him.

### FEDERAL TRAFFIC BUREAU

Twice weekly schedules have been maintained during the year, and the very satisfactory manner with the Divisional Traffic Managers. VEKARE, VEKJAT, VKGSA and VKTOM. A total of 262 (400) contacts was made during the period, but the increase in both towards and outwards, was very much less than the previous year. Inwards messages totalled 78 (53) and outwards 27 (66) to a total of 85 (119).

The figures in brackets are the comparative totals for the year 1948-49.

### TREASURER'S REPORT, 1949-50

It is with pleasure that I herewith report the annual statement of receipts and expenditure covering the accounts of the W.I.A. Federal Executive.

I desire to stress the necessity of promptly remitting Divisional per-capita payments for the purpose of financing the work of the Executive. This is our only source of income that can be so applied and it is obvious therefore that we must receive your remittances promptly to facilitate our work. It should be pointed out also that the Divisional contributions to the Convention expenses are based upon the membership returns associated with per-capita without which it is impossible for me to compute what contributions each Division should make. At a later stage we will submit for your consideration some alternative suggestions for financing the operations of the Convention. The budgetary figures submitted to you at the 1949 Convention were approximately correct for this year's operations. I now submit herewith the expense account for 1949-50 and budget estimates for the 1950-51 period.

The Treasurer's budget for 1950 was also read —	
QSL Bureau .....	£110 5 0
Printing and Stationery .....	10 0 0
Audit .....	8 0 0
Trophies and Prizes .....	15 0 0
Convention Dinner .....	14 0 0
Petty Cash .....	18 0 0
Convention Dinner .....	20 0 0
Convention Expenses .....	12 0 0
Entertaining .....	10 0 0
Contingencies .....	20 0 0
	£181 0 0

As a result of the Treasurer's report, the following motions were resolved —

"That Federal Executive keep a separate account for Convention expenses as distinct from general expenses." — Carried.

"That the amount of the Convention expenses quota per Division, Federal Executive use the previous year's numbers of full members supplied by each Division in their per capita return." — Carried.

"That the amount of money paid by Divisions as Convention expenses in excess of that actually used shall remain in a Number 2 Account to their credit against the next Convention." — Carried.

"That the rendering of Convention accounts to Divisions be made before the 30th November in each year and that the latest date for payment be within 14 days of the date of the Convention." — Carried.

"That the Statement of Receipts and Payments, as presented by the Federal Treasurer, be adopted." — Carried.

The New South Wales Delegate desired placed on record that there is no balance sheet and in his Division's opinion a balance sheet is an essential part of the Treasurer's report.

An assurance was given by the Treasurer to the N.S.W. delegate that a balance sheet of Federal Finance would be forwarded to Divisions as soon as possible.

"That the budget as presented be adopted for the year 1950." — Carried.

A resume of the minutes of the 10th Annual Convention took place and it was resolved —

"That an expression of appreciation be recorded to those responsible for the design and manufacture of the Remembrance Trophy." — Carried.

"That the Minutes of the 19th Convention as presented be adopted." — Carried.

The President then asked the Treasurer if all Divisions were financial and advice was given that no contributions had been received from VK2 and VK4 Divisions.

A discussion regarding powers of voting then took place and the following motion was carried unanimously — "That this Council extend the time for payment of the 1950 per capita payment to 31st April, 1950, in accordance with Section 41a of the Federal Constitution."

### FEDERAL QSL BUREAU

The Federal QSL Bureau again functioned smoothly during the period under review. Cards handled totalled 55,825 as compared with 47,786 in 1948-49, and 55,409 in 1947-48. The lower total is attributable to the continued publicity given to the addresses of the Divisional Bureau, and to the greater circulation of International call books, thus encouraging stations to either send cards direct to the addressee or to the Divisional Bureau.

Despite the reduced volume of traffic handled by the Federal Bureau, costs of handling continued to rise. This is a result of an average overall increase of 50 per cent. in the postal charges for printed matter, which took effect from July, 1949. The increased rates covered two-thirds of the year's activities. When the Federal Government, now in office, were in Opposition, they made numerous requests to the Government for reductions in postage rates, in which they were strongly supported by influential bodies such as the Chambers of Commerce, etc. Since the last Federal election with the consequential change in Government, no mention has been made of this matter, nor has the Associated Chambers of Commerce been heard of on the subject. For the year 1949-50, the cost was increased in the next Federal budget when presented later in the year. Costs now work out at 3.85 pence per 100 cards as compared with 3.87 pence last year.

### WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

#### STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 31st MARCH, 1950

RECEIPTS		EXPENDITURE	
Balance in Bank, 1/4/49 ..	£87 8 10	Convention Expenses ..	£119 28 0
Per Capita Payments: ..		P.M.G. (Cable Address) Telegraphic ..	2 2 0
VKT ..	£5 8 0	Licence VKS ..	1 0 0
VKT ..	12 4 2	Insurance ..	4 0 0
VKS ..	37 11 0	P.O. Box Fee ..	1 0 0
VKS ..	10 16 0	Insurance (Trophies) ..	16 0 0
VKS ..	7 0 0	Photographing Trophies ..	2 10 0
VKS ..	8 12 8	Trophies and Prizes ..	11 0 0
VKT ..	5 10 0	Badges and Shields ..	70 9 8
VKT ..	8 17 0	Printing ..	3 8 8
Convention Expenses quota ..	108 0 8	Typing and Duplicating (Minutes, Constitution, etc.) ..	34 4 6
VKT ..	£6 10 0	Audit Fees ..	2 5 0
VKS ..	4 0 0	Secretary's Stationery ..	18 0 0
VKS ..	11 0 0	Bank Charge ..	10 0 0
VKS ..	18 6 8	Advance to 1950 Convention Expenses ..	
VKS ..	12 13 4	VKS ..	£19 10 0
VKS ..	8 12 8	VKT ..	84 0 0
VKT ..	8 10 8	VKT ..	10 6 0
VKS ..	32 9 9		
VKS ..	5 8 8	Balance in Bank ..	92 18 0
			7 17 1
Certificates ..	150 8 11		
Entertaining ..	28 10 6		
Exchange added to cheques ..	2 8		
	£264 0 13		£264 0 11

I hereby certify that I have examined the Cash Book and Vouchers of the Federal Executive of the Wireless Institute of Australia, reconciled the Cash Book with the Bank Pass Book as at 31st March, 1950, and prepared the above Statement of Receipts and Expenditure which, in my opinion, correctly shows particular Receipts and Payments for the year, according to the books and the information given to me.

(Sgd.) THOS. F. HISCOCK, F.C.A., Chartered Accountant (Aust.).  
Wireless Institute of Australia, Federal Executive—(Sgd.) F. Evans, Hon. Treasurer.

year and 2.24 pence in 1947-48. Despatches to the Victorian Bureau were again delivered by hand, thus reducing the working cost of the Federal Bureau and the thanks of all are due to Mr. Les Jackson, VK3VJ, for his work in this connection.

Division 4, QSL Bureau personnel remained unchanged throughout the year with the exception of the Queensland Division, where during the year the duties of QSL Manager were taken over by Mr. Eric Lake, VK4VJ. The Federal aspect, all the Divisional Bureaux functioned efficiently.

Items of interest from a QSL aspect, as well as other items of general interest were published monthly in the Federal QSL Bureau notes in "Amateur Radio".

#### Statement of Receipts and Expenditure—

Receipts	
By Credit Balance from 1948-49 ..	£0 4 1
By Advance from Federal Executive ..	£0 0 0
	£0 4 1

Expenditure	
To Postages on despatches to Divisional Bureaux, W.A.C. applications, general stationery and surcharged ..	£7 16 4
To Cash and stamps on hand .....	7 6
	£8 4 1

The New South Wales Delegate: "How does the proportion of members to total licensed Amateurs compare?"

The Chairman: "There are 2,800 licensed and the W.I.A. membership is 2,282, which includes associate members as well as transmitting members."

## Minutes of the Convention

The following sets out the findings of the 20th Annual Convention. All decisions under the heading of General Business must be ratified by a majority of the Divisional Councils before the necessary action can be taken.

### AGENDA ITEMS

- "That the amended rules of the DX C.C. as attached at Appendix A, with the deletion of the words 'or the A.R.R.L. List' in Rule 5, be adopted." The motion was Carried.
- The Western Australian delegate stated that in view of the fact that Appendix A has been accepted we are in a position to withdraw the item.
- "That a special certificate be provided by Federal Council to be awarded by Divisional Councils or Federal Council to members in cases where no suitable award exists."—Carried.
- "That Federal Executive be directed to contact the I.A.R.U. with a view to setting up an international organization for controlling DX C.C. matters."—Carried.
- "That Federal Council recognize that Tasmania be regarded as a separate country for the purposes of the Australian DX C.C. Award."—Lost.
- "That a standard set of rules, as submitted by the New South Wales delegate, be adopted for the V.R.Z.L. Contest."—Carried.
- "That draft proposals for any change in the standard conditions of the V.R.Z.L. Contest be circulated to all Divisions at least five months before the Contest."—Carried.
- "That draft proposals for any changes in rules to the Australian Contest be circulated to all Divisions at least three months before the Contest."—Carried.
- "That in future National Field Day Contest the 1000 Mc. award be reduced to be \$5 for each new state or country."—Carried.
- "That Federal Executive be instructed to approach the I.A.R.U. with a view to securing the operations of the amateur service and organizations on a worldwide basis in limiting these in limiting these to one week-end per year for phone and one for c.w."—Carried.
- "That the Trans-Tasman Contest be eliminated."—Carried.
- "That the period of operation of any local award certificate be limited to only 12 consecutive hours within the 24 hours set out."—Carried.
- The Queensland delegate withdrew this item in lieu of Item 10.
- "That the scoring procedure for the award of the State trophy for the Remembrance Day Contest, as used in the 1948 Contest, be reverted to."—Lost.
- "That the existing rules for the 1949 Remembrance Day Contest be adopted for the 1950 Remembrance Day Contest and that the method of determining remain unaltered for the trophy and individual scores."—Carried.
- Amendment: "That in respect of the points to decide who shall hold the trophy, that the following criteria be made: That the top of the list of high scores be averaged and to this average be added

There are 1,600 licensed Amateurs as full members. We represent 90 to 75 per cent. of the active transmitting members, most are not active."

S.W. Delegate: "Where have you found that member club activity has been greatest?"

Chairman: "Zones have been progressing very favourably. There are three clubs in Victoria, and New South Wales has been most successful."

S.W. Delegate: "The inclusion of member clubs in the future of this arrangement, concerning W.I.A. and club affiliations, have we no further trouble similar to that which we had with clubs quite a few years ago?"

Chairman: "There was a group in Darwin who wanted to form a club. There are now part of the South Australian Division. They will grow a useful size until they grow up. They have not got 25 fully licensed members."

The Chairman then read a letter which had been received from the South Australian Division praising the work of the Federal Secretary.

W.A. Delegate: "Can you give us an indication of the number of observers of commercial interference there being operation?"

Chairman: "Your State is the most active. Most of the other States have not done as much in this matter. In N.S.W. there are none, in Victoria 2, in Victoria 2, in Queensland 2, in South Australia 1 and in Western Australia 1, a total of 5. In South Australia one man collects a whole lot of individual reports. Western Australia provided us with a considerable amount of data."

S.W. Delegate: "I understand that we have some interference not to the same extent as in Western Australia."

It was then moved that the Federal President's report as read be adopted.—Carried unanimously.

a bonus equal to twice the percentage entries in the State." The amendment lapsed for want of a second.

The original motion was carried.

15 "That in future National Field Day Contest fullest publicity be given by all Divisions in every way possible for the months prior to the contest and further that Divisions organize teams to ensure active participation by all States."—Carried.

16 "That an endeavour be made to evolve a standard numbering system for world wide contest and that the numbering system already decided upon for the V.R.Z.L. contest be recommended as a suitable system."—Carried.

17 "That all relevant aspects of the publication of 'Amateur Radio' from a Federal viewpoint be discussed with the Victorian Division."—Carried.

After discussion it was moved by Mr. G. Moss (W.A.) and seconded by Mr. E. Austin (S.A.) as follows: "That we are gratified with the improvement this year in the quality of the contest and that the present satisfactory position continues."—Carried.

18 "That the responsibilities of Federal Council concerning Amateur Radio be determined."

After discussion the following determination was arrived at—moved by Mr. J. Mayle (S.W.) and seconded by Mr. G. Moss (W.A.): "That the responsibilities of Federal Council concerning 'Amateur Radio' shall include—

- (a) The preparation of Editorials;
- (b) All opinions concerning Federal W.I.A. matters and/or contacts with other bodies;
- (c) Any matters which might prejudice relations between Divisions or between Amateurs generally."

—Carried.

19 "That the quarterly statement as now supplied to the Executive and the Committee of 'Amateur Radio' be continued."—Carried.

20 "That 'Amateur Radio' publish from time to time suitable articles taken from overseas technical magazines."—Carried.

21 Federal Executive withdrew this item.

21a "That the contents of the Institute's Policy Book be reviewed at each Convention to preserve continuity of Federal policy."—Carried.

22 "That the financial clause be incorporated in the Federal Constitution dealing with Membership Transfers to provide that—

- (1) The recipient Division shall receive him as a financial member;
  - (2) The remainder of the financial year provided he was fully financial before departing from the losing Division.
- (3) The Secretary of the losing Division shall advise the Secretary of the recipient Division of the intending transfer and of the member's financial status and grade."

—Carried.

22a "That a specimen application form for membership be incorporated in the Federal Constitution (as amended 1947) and be adopted."—Carried.

22b "That the uniform Divisional Constitution as discussed be considered by the Division and returned with their comments for incorporation in the next draft, the Federal Executive at the earliest possible moment."—Carried.

22c "That upon the acceptance of the uniform Divisional Constitution by each Division that Divisional Councils be asked to give notice to the uniform Divisional Constitution without the approval of Federal Council."—Carried.

23 "That Federal Executive be instructed to institute amendments to the Federal Constitution to provide that in matters of finance involving all Divisions, a majority vote of at least 5 to 3 of the Federal Council be required for the passing of the motion."—Carried.

24 "That the minutes of the Federal Executive meetings as now supplied to all Federal Councils be continued."—Carried.

25 "That Federal Executive formulate arrangements for the redemption and entertainment of overseas Amateurs in 'Back to Australia' year."—Carried.

26 "That the 1951 Convention be held in Sydney."—Lost.

27 "That Federal Executive approach the P.M.G. for permission to play back recorded 50 Mc. or higher Amateur transmissions on those bands."—Carried.

28 "That representations be made to the P.M.G.'s Department for permission to record by modern technique transmissions of Amateur Stations and the back of the air on frequencies to be laid down by the Department."—Carried.

29 "The New South Wales delegate withdrew this item as the matter had already been fully published."—Carried.

30 "That the P.M.G. be approached for permission to transmit music on type A3 stabilized emission for experimental purposes on sections of the bands between 1.6 and 1.8 Mc."—Carried.

31 "That the P.M.G.'s Department be approached with a request that all licensees in the Northern Hemisphere be notified of the prefix VHA."—Carried.

32 "That Federal Executive be asked to endeavor to speed up the allocation of the 21 Mc band in view of the large amount of commercial interference on the 7 and 14 Mc bands."—Carried.

33 "That Federal Executive approach the P.M.G. for permission to broadcast from the Institute stations, talks of a technical nature such as those given at meetings."—Carried.

34 "That Federal Executive be directed to discuss with the Broadcasting Control Board the matter of TV with a view to suggesting certain transmitting and receiving frequencies to manufacturers in Australia."—Carried.

35 "That the P.M.G.'s Department be approached to issue a permit for portable operation to the 27.5 Mc band."—Carried.

36 "That representations be made to the P.M.G.'s Department for permission to operate transmitters on frequencies in the 27.5 Mc band, on a portable licence, in any frequency band."—Carried.

37 "That the age limit for the issuance of the A.C. and the granting of an Amateur Station Licence be reduced to 14 years."—Carried.

38 The Victorian delegate withdrew this item.

39 "That the gentlemen's agreement band for c.w. be extended to be extended to 7650 Kc in view of the emergency network phone on 7000 Kc."—Carried.

40 "That approval be sought from the P.M.G. for the use of an identifying signal by Amateurs conducting emergency communications. The signal to have the significance: 'I am conducting emergency traffic, please do not cause interference, and that Federal Executive be instructed to give the signal wide publicity."—Carried.

41 As a result of the discussion which took place on interference received from medium frequency broadcasts (transmitters) it was decided to publish in 'Amateur Radio' the need for more reports from observers on this type of interference.

42 "That this Council recommend that phenetic be used only where necessary and that the International Liaison be recommended as being known throughout the world. Federal Executive should publicise this decision."—Carried.

### ITEMS OF GENERAL BUSINESS

(All Divisions to ratify all items under this heading)

1 "That Federal Executive be instructed to face the necessary steps to amend section 41a of the Federal Constitution to include the word '20' and inserting the word '24'."—Carried.

2 "That an expression of opinion regarding the advisability of the name of the W.I.A. being changed to the view of the Federal Executive be (40 years old and could possibly be brought into line with current development."

This question was discussed, but it was felt that no time should be taken in the meeting name which is well established, for sentimental reasons, and in addition the cost of such an action would be considerable.

3 "That Federal Executive supply each Federal Council with a copy of the summarized policy of the Federal Council and with amendments to the Constitution."—Carried.

4 "That the 50 mile radius limit on portable licences be abolished."

The Victorian delegate withdrew in view of the explanation supplied.

(Continued on Page 10)

Compiled by J. K. RIDGWAY, VK3CR.

144 Mc. continues to be the centre of interest for most v.h.f. activities these days, stimulated, no doubt, by the many successful contacts between VKS and VK7 in the past few weeks. It appears likely that with the more serious interest that is being taken in band conditions, and the increasing use of good equipment, coupled with the growing population of the band, much be done to still further the DX horizon.

The following letter from Doug Fisher, TAB, will be of interest to those who followed his activities on 18th April (see "Operation Apple Pie" —50 and Above, May, 1960).—

"I am writing you a few details which may be of some interest of our 50 and 164 Mc. operation from Table Cape, near Wynyard. For some time prior to our operation, we made arrangements through SACL with BBR, who was to co-operate from the Victorian end to cross Bass Strait on 14

Mc. From the end, I found that I could not get my transmitter finished in time, so 7RB concentrated on that which was an SCRS22 driving Philips QG06/40 (his own transmitter) and we were able to run 60 watts input with excellent efficiency. The transmitter was rated at 50 Mc. also. I used my own converter, a 6AK5 broad-band r.f. feeding into a 6AS mixer converter and into a normal nine tube receiver at 70 Mc. with a 6AR5 detector. The antenna was a 100 ft. wire was a pair of 830ft. in Class H used here normally at 7AB. The antenna system, which I think did a very fine job, was the 16 element job described in the 7AB manual. We used it on end on for horizontal polarization.

"Although operating was scheduled for 16th April, we went up to Table Cape on the 15th. Saturday afternoon and stayed the week-end in a caravan. We were able to contact 21C1, and 21C2 on the Saturday evening on 50 Mc. and then got back to the station on the 17th. On the 18th at 6.30 a.m. Next morning we were up early and had a very good breakfast of eggs and mussels, had a few contacts on 40 metres until we heard 2RR at 7.15. We were not prepared to call him, but he was ready to contact him, the Type A Mark III gave out and we heard 2RR contact 7FF on 7 Mc. and arrange to call him. We listened on 144 Mc. and 2RR was calling 7FF. By this time the Type A Mark III was working again, so we went to 2RR, who straight away listened for us on 144 Mc. He missed us as we gave our frequency as 145 Mc. whereas we were on 145.8 Mc. and this was a very close call. We then contacted 2RR with a crystal controlled converter. Anyway, we made a seek for 50 Mc. for 12.30. This contact was very brief indeed and we also contacted 2RR

"A check was made for 1330 on 144 Mc. and at this time we had an excellent contact with the defendant signals both ways. We then used c.w. and contacted SBN at 1400 hours and SAKK at 1450 hours. TFF was hearing us when we turned our beam his way but we could not hear his 144 Mc. signals, so we had a cross-band contact from that band to 7 Mc. At 1540 hours we contacted ZRL who was in the vicinity at Stanley. At 1630 we had the beam in Victor again and contacted TFL at Kingslake, then at 1638, SGR and 1650 SFG. We had to back up then and get away and we were able to get away then by dark.

"Judging by the signals and our reactions to the band, we are sure that we could contact the stations at the same location again if we went to Table Cape and did not think that we had a "break through" but would be possible any time. We were very fortunate to have a.c. power available at Table Cape (450 feet above sea level) from Mr Robert Thomson at Table Cape farm."

## VICTORIA

Usual local and country contacts have continued on the band this month. No DX openings have been reported and the path to VK7 has been open once or twice only. SACL having worked 7XL from his home location with rather weak signals.

On the 15th and 16th, 7AB, who was portable at Table Cape, worked SACL, SOD and 3HK with good signals. Lack of other unusual activity leaves no more to write about this month.

## THEORY

A slight increase in activity on this band has been evident lately. Newcomers to the band are 6HR and 6HL. 6HR is using his gas transmission push-pull 807A at reduced input, but will be able to increase power when sufficient drive is found for the 6AL. Receiving set-up is the normal Kx with one of the lower frequency ranges re-tamped for six. Antenna at present is dipole. 6HL has been testing mobile gear to cover both ten and six. 6RR now using a crystal controlled converter that seems to be doing a good job judging by the comparative ease he has in hearing country stations.

Every Sunday and Monday evening at 8 p.m. from now onwards will be set aside by 60 Mc. stations for a "six metre round-up." QSOs will be kept down to about 10 minutes if possible to enable country stations to break-in if Perth signals are getting out.

6DNF, Bruce Rock, still getting down to the city on c.w. and worked 6FC and 6HK recently. 6GS, Harvey, fractured his 6 metre crystal, but believe he has another supplied by a city Ham. Stations now operating six metres in W.A. are 6BO, 6FC, 6FW, 6DD, 6HL, 6HR, 6KR, 6LW, 6AS, 6GB, 6DW, 6EO, 6GS, 6WG. Incidentally, 6BO is now using 807 in the final and is saving his 815 for 144 Mc.

There were some more interesting contacts with VK3 to report this month. First, as mentioned last month, on the 18th April, 7AB was portable on 14.100 MHz, and was heard by 7AB, 7AC, 7AD, 7AE and 37E. The latter contacted, at 837 miles, was the best for the day. On the evening of the 14th, 7AB was contacted on 14.100 MHz, and 7AB, 7AC, 7AD, 7AE and heard 7MC at 55. The next day, being a holiday, hourly contacts were arranged commencing at 14.100 with the signals peaking 55 plus at 1400. 7AB, 7AC, 7AD, 7AE and 37E were promptly established when the first contact was made. The signals, and hourly contacts were maintained up to 14.100 with the signals peaking 55 plus at 1400. 7AB, 7AC, 7AD, 7AE and 37E were promptly established when the first contact was made. No other VKs are contacted that day, although 38B, of Geelong, was heard 7AB. The same evening 7AB, 7AC, 7AD, 7AE and 37E were contacted on 14.100 MHz, however he disappeared shortly later and no further contacts have been made up to the time of writing.

On the morning of the 28th at 1100 hours, SAKK opened up a new VRS path by working 3ALS at Yallourn, with 86 signals. This distance is approximately 110 miles. So far, 3ALS and STU, of Yallourn, have not been able to hear Melbourne stations 75 miles away, from their home locations, although they are easily worked from a portable location outside the town and about 150 feet higher.

SAPP, of Shepperton, has now made a number of Melbourne contacts, having worked SABA, SIM, and SPQ over this 100 mile path. SUI, of Tatsuta, has also broken through, having worked SPQ.

Despite poor weather, a highly successful Field Day was held on the 7th of July when 15 stations netted 3YS, Mt Macedon, 8FO, Arthur's Seat, 8TO, Yallourn, 3ACH, Kinglake, 3SL/GM, Mt Buninrong, 3JO, Mt. Dandenong. 7AB was also co-operating, but due to poor conditions, nothing was heard from him. However all the VESs out had a large number of contacts, with the record possibly being held by 8FO who worked 15 different stations. Best distance was 8TO to 3SL/GM, 240 miles.

2005 Mo. CONTACT IN W.A.

On a recent visit to Perth, 6DW, using mobile gear, worked 6BO on 165 Mc, the best distance covered being 15 miles. This constitutes a record for 165 Mc. in Western Australia.

OMK and OMK reported to be getting ready for the band with 7194s and super-regen receivers.

## Annual Federal Convention, W.L.A.

(Continued from Page 25)

5. "That a discussion take place on the unrest caused to many Amateurs by the use of excessive and illegal transmitter power by a few Amateurs."

A discussion took place on this question and delegates agreed to bring this matter to the notice of their local Amateur Advisory Committee.

6. "That a Contest Committee be formed in each State, if not already in existence. Such Committee to be formed from experienced Contest Amateurs and to make recommendations on all contest matters referred to the Federal Council or Divisional Council"—Carried.

7. "That steps be taken to publish a list of overseas prize winners in the 1948 VFL Contest."

8. "That the Awards Committee be instructed to publish from time to time in "Amateur Radio" an up-to-date list of countries and if applicable, stations which are not acceptable for DX C.C. and contest credit and the reasons therefor"—Carried

9. "That the standard numbering system for exchanges as adopted from time to time for the VR-ZL Contest shall be applied also to all Federal Contests."—Carried.

10. "That the Federal Executive organize an annual 50 Mc. contest with trophies including two sections, one for transmitting and one for receiving. The trophy for the transmitting section will be known as "The Ross A. Hall Memorial Trophy" (Reference General Business Item 2, 1949 Convention.)—Carried.

11. "That the Agenda of the 25th International Congress to be held in Paris in May, 1950, be considered with a view to briefing the R.S.G.B. on our behalf."

"That Federal Executive be requested to ask the R.S.C.B. to represent us in any matters it feels appropriate providing such matters have authority under the Institute's policy book or from matters agreed to in the 20th Convention."—Carried

13. "That the Federal Council recommends to all Divisions that the principle to be accepted in tendering for Disposals equipment in any one State be that no tenders are to be submitted from an outside State without prior consultation between the Divisions concerned."—Carried.

# Low Drift Crystals FOR AMATEUR BANDS

ACCURACY 0.02% OF  
STATED FREQUENCY

3.5 Mc. and 7 Mc.		
Unmounted	....	£2 0 0
Mounted	....	£2 10 0

**12.5 and 14 Mc. Fundamental  
Crystals, "Low Drift,"  
Mounted only, £5.**

**Spot Frequency Crystals  
Prices on Application.**

<b>Regrinds</b>	<b>£1 0 0</b>
-----------------	---------------

THESE PRICES DO NOT  
INCLUDE SALES TAX

**MAXWELL HOWDEN**  
15 CLAREMONT CRES.,  
CANTERBURY, E.7,  
VICTORIA



# FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZB), Box 2611W, G.P.O., Melbourne.

## NEW SOUTH WALES

Secretary—Mauree Butler (VK3AN), Box 1734 G.P.O., Sydney  
 Meeting Night—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney

Divisional Sub-Editor—A. C. Pearce, 181A Balmain Road, Leichhardt, N.S.W.

Zone Correspondents—North Coast & Tablelands: M. Retail, c/o VK210, Raleigh, Newcastle  
 M. Whyte, VK2AB, Vale St., Birmingham Gardens, Newcastle, Cessfield and Lakes: G. Hawling, VK2YV, 27 Comfort Ave., Comstock, Western, W. H. Butt, VK2WH, Camblow, Forbush, South Coast and Southern: R. B. Rayner, VK2DO, 49 Pettit St., Yass  
 Western Suburbs: A. C. Pearce, VK2AB, 48 Harbord Ave., Five Dock, Eastern Suburbs: B. Kerr, VK3AX, 30, 4 Flat, 114 Herlieth St., Brookvale, North Shore: D. Cuffe, VK3AM, 775 Maritime Rd., Mosman; S. George; J. A. Ackermann, VK3AL, 82 Park Rd., Carlton, South Sydney: V. H. Wilson, VK2YV, Or, Wilson St. & Marine Pde., Manlyville.

## VICTORIA

Secretary—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6392)

Administrative Secretary—Mrs. R. May, Law Court Chambers, 191 Clarendon St., Melbourne, C.I.

Meeting Night—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents—Western: C. C. Warring, VK2YV, 12 Scone St., Seawall; South Western: K. O'Horne, VK3AKH, Killigree, Westmore, North Eastern: H. G. Whitten, 107 Templeton St., Warrnambool; Far North Western: M. Ellis, 101 Lennon Ave., Mildura; Eastern: K. G. Lee, VK3AHE, Yinnamara, North Western: C. Case, VK3ACE, Cumming Ave., Birchip

## FEDERAL

### DX C.C. LISTING PHONE

VK3JD (1) .....	26	143
VK3KN (4) .....	37	134
VK3KT (3) .....	27	132
VK3BX (3) .....	26	129
VK3KE (10) .....	125	
VK3JE (5) .....	114	
VK3MD (9) .....	40	161
VK3KS (9) .....	113	
VK3LN (11) .....	112	
VK3HR (1) .....	83	107
VK3AD (14) .....	107	
VK3IO (6) .....	100	
VK3JE (7) .....	109	

### O.W.

VK3BE (9) .....	40	165
VK3BO (2) .....	40	158
VK3BN (9) .....	40	160
VK3EL (9) .....	40	140
VK3EB (10) .....	30	138
VK3YV (4) .....	40	133
VK3QL (3) .....	40	133
VK3HR (5) .....	41	106
VK3YV (15) .....	38	136
VK3EK (2) .....	39	123
VK3RF (11) .....	35	119
VK3RU (16) .....	118	
VK3YV (12) .....	37	107
VK3AD (7) .....	35	113

### OPEN

VK3BZ (4) .....	47	159
VK3EX (1) .....	40	167
VK3YV (8) .....	39	166
VK3YV (7) .....	39	166
VK3DI (3) .....	40	160
VK3HQ (2) .....	40	160
VK3YV (12) .....	39	134
VK3YV (12) .....	39	133
VK3EL (13) .....	40	149
VK3YV (15) .....	39	139
VK3OP (12) .....	39	132
VK3ES (24) .....	36	133

## A BRAILLE MAGAZINE

Everett A. Erickson, WINLM, of 6 Oaklands Heights, Bethel Conn., U.S.A., in association with other U.S. Amateurs, is compiling a new Braille magazine for the blind Amateur and a.s. If you know of anyone who might be interested in such a praiseworthy scheme, it would be appreciated if you will communicate with WINLM

## WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during and for a period of 15 minutes after the official Broadcasts.

VK2WI—Sundays, 1100 hours EST, 7100 Kc. and 2000 hours EST, 604 Kc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI—Sundays, 1130 hours EST, simultaneously on 8580 and 7195 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency, 7165 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI—Sundays, 0900 hours E.S.T. simultaneously on 8750 Kc., 7195 Kc., 1448 Kc., 52 Kc. and 144.135 Kc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 1402 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI—Sundays, 1000 hours SAST, on 7195 Kc. Frequency checks are given by VK4WD on Friday evenings on the 7 and 14 Mc. bands.

VK6WI—Sundays, 0930 hours WEST, on 7195 Kc. No frequency checks available.

VK7WI—Second and Fourth Sundays at 1000 hours E.S.T. on 7195 Kc. No frequency checks are available.

## TRANS-TASMAN CONTEST

In view of Agenda Item No. 11, of the 20th Annual Convention, the Trans-Tasman Contest will not be held.

## RADIO INSPECTORS ENTERTAINED

The Federal Executive, on behalf of Federal Council, entertained Radio, Dobbyn and Pearson, of the Wireless Branch of the P.M.G. Department, at a farewell dinner to Bill Mitchell (VK3UM), the last Federal Secretary, who was presented with a Parker 51 Pen in appreciation of his sterling services. It is hoped that Bill's official duties will permit him to put this pen to paper and thereby give us some news of the Amateur doings in England during the next two years.

Mr. J. Dobbyn, an Amateur, VK3DO, has spent the past 24 years as the Commonwealth representative on the International Telecommunications Union at Geneva where the allocation of frequencies to all types of services is being considered on engineering principles. As the Atlantic City Convention granted the Amateurs of the world status as a service, your interests were considered, but the bringing into operation of those decisions is still in the distant future. When the time does eventually arrive for us to have the 31 Mc. band, there will be, as a counter measure, a decrease in the frequencies on 7 and 14 Mc. as determined at Atlantic City.

## CHANGES TO AMATEUR CALL SIGNS

New Issues—  
 VK3ST—E. C. Stone, 84 Stoddard St., Moaman  
 240H—A. Harvey, 3 Boka Rd., Moaman  
 3AQZ—R. H. Black, 36 College St., Sydney  
 3ALM—J. G. Mow, 10 Beldy St., Chateauwood  
 VK3SK—Lawrence, 18 Bennett St., North Richmond.  
 3AFQ—E. L. H. Treherne, 11 Glenvale Rd., Glen Iris  
 3AHP—W. H. Fleming, Springhurst.  
 3ARN—L. C. Wrightman, 12 Taylor St., Oakleigh  
 VK3EH—R. P. Hambridge, 67 Pine St., Wynnman  
 3BRK—R. W. Rose, Camoway St., Longreach.

## W.I.A. ACTIVITIES CALENDAR

June 7: Ratification of Convention Items due with F.E.

## QUEENSLAND

Secretary—W. L. Stevens, VK4TB, Box 6983, G.P.O., Brisbane

Meeting Night—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor—F. H. Shannon, VK4SN, Minden, via Rosewood.

## SOUTH AUSTRALIA

Secretary—E. A. Barber, VK5MD, Box 1234X, G.P.O., Adelaide

Meeting Night—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor—W. W. Parsons, VK5PB, 465 Kaplandale, Henley Beach.

## WESTERN AUSTRALIA

Secretary—W. E. Conzon, VK6AG, 7 Howard St., Perth

Meeting Place—Padbury House, Cor. St. George's Ter. and King St., Perth.

Meeting Night—Watch the Monthly Bulletin.

Divisional Sub-Editor—George W. Ashley, VK6QA, 33 Mars Street, Carlisle, Western Australia.

## TASMANIA

Secretary—R. D. O'May, VK7OM, Box 673B, G.P.O., Hobart.

Meeting Night—First Wednesday of each month at the Photographic Society's Rooms, 183 Liverpool St., Hobart.

Divisional Sub-Editor—G. D. B. Clarke (VK7TA), c/o 2HO, 83 Elizabeth Street, Hobart, Tas.

Northern Zone Correspondent—R. H. Kilby, VK7BE, 8 Galvin Street, Launceston.

VK5WY—G. C. R. Waters, c/o, Kahlin Hospital, Darwin, N.T.

VK4HY—R. H. Aubrey, 130 Canning Highway, South Perth

401B—L. J. Bollock, "Alderley", Bickley, Victoria

401B—T. H. Mitchell, 121 Hill St., Perth

VK7HK—S. G. Kitchen, 11 Pine Ave., Seven Mile Bag, Hobart

78W—J. C. Wray, 46 Pirie St., New Town, Victoria

VK3PM—H. B. Moyle, Civil Aviation Department, Port Moresby.

## Attractions

VK3GK—22 Launders Road Lane Cove, 2KN—2 Taluna, Liffelien St., Herne Bay.

3QX—148 Wileys Ave., Lakemba.

3YB—c/o E.S. "River Burdick", c/o, Austral, 1000 Wileys Ld., 47 York St.

3YB—458 Rocky Point Rd., Sam Sound.

3YB—9 Leo St., Gladwinville

3YB—61 Alma St., Marcella

3ARU—21 Sandridge St., Bend.

3K3B—212 Arman St., North Ewington

3BZ—1 Stanley St., North Williams

3J1—60 St. Andrews St., Brighton.

3JN—Rear 488 Neerim Rd., Murrumbidgee.

3QF—4 Birchwood St., Parkdale.

3PZ—123 Sutherland St., Shepparton.

3QF—4 Lemnos St., Croydon

3YB—1000 Wileys Ld., 47 York St.

3YB—1000 Wileys Ld., 47 York St.

3YB—1000 Wileys Ld., 47 York St.

3YB—1000 Wileys Ld., 47 York St.

## PUNCTUALITY

During the last few months some correspondents to this magazine have been forwarding their notes in late in an endeavour to continue to deliver to you the magazine on the first of each month, it is requested that all notes be posted to arrive before the 8th of the preceding month.

Your co-operation in this respect would be appreciated. No responsibility will be taken by the Magazine Committee for the non-appearance of notes received after the closing date. This will be strictly adhered to as from this issue.

## FEDERAL QSL BUREAU

RAY JONES (VK9JR), MANAGER

Official advice has now been received of the re-issuing of Amateur Stations in Poland with the old International prefix of call signs and of their official organization. The organization has retained its old title which is PZK (for short) and its address is: PZK, ul. Dlugi, 10 (QSL Bureau is PZK, Poczta 340, Warsaw, Poland.

An International Congress of Radio Amateur Associations affiliated with the I.A.R.U. was scheduled to be held in Paris, France, on 26th to 31st March. The Congress was organized to celebrate the twenty-fifth anniversary of the founding of the I.A.R.U. and the R.E.F., according to advice from the latter body.

According to the official A.R.R.L. broadcast, heard at excellent strength on 14.100 Mc. on April 18, the D.L. Expedition to the L'Ange Island, conducted by the Queensland Radio Club, has been delayed. The scheduled sailing date was postponed to April 12. Four days' sailing time will be required and during that period the expedition was scheduled to operate maritime mobile on 80 Mc. On arrival at L'Ange Island, the expedition will operate on 80, 40, 20, and 10 metre bands. Both phone and c.w. under the call sign HC80BC. No information was given as to the duration of the stay of the expedition.

During the late day of April 12, Polk, PK8AK, states that a private home call sign is in use. The call sign PK8AKR. Polk requests the co-operation of all stations in "covering the black net." I presume the day that the only call sign so far issued are PK8AKR through PK8AK, but indicates that PK8AK and PK8AKR are expected to be on the air in the near future.

Andre Baillet left Noumea for Matani (Wallis Island) about April 18. As forecast in those notes, Andre will operate under the call sign FW8AA and first will use a power supply with a small rig using a vibrator power pack putting about 10 watts into a half wave Windom antenna. No further details as to hours of operation are yet available, but as Andre is scheduled to remain at Matani for three days, there will be time for all to make the contact. Andre has been well educated in the methods of obtaining pile-ups on his frequency.

The full QTH of ZK1BC, who is currently putting in a half p.w. signal to VK on the 14 Mc. band. He is B. Hanley, ex Civil Aviation Branch, Rangoon, Ceylon Island.

The full QTH of VK9QJ, who is presently active on 14 Mc. c.w. is 20524 L.A.C. W. Cromie, R.A.F. Station, Mombasa, Aden Colony. VK9QJ, who is ex-VK9AVO and ex-VK9QJ, says conditions are usually good there in the evenings and early mornings and from 09.15 G.M.T. the VK stations pour in. He advises the use of airmail for QSL's as surface mails take up to three months to arrive.

Melbourne is again to be favored with a visit from VK6SA, Jim Austin, still very active and with ability undiminished by the passing years. Jim is attending the two yearly conferences of the Police Department of his State. It seems only yesterday that Jim attended a similar gathering here, which is indicative of the speedy passage of time.

My old friend, Treb, of B.E.R.S. 195, ever willing to assist in any way possible, succeeded in making contact by correspondence with VK6WL and thus straightening out an awkward situation with VK6WL for the latter station. The following topical pairs from B.E.R.S. 195 are also appreciated.

Ken Cook, G2RKL, is anxious to have 7 Mc. contacts with VK stations. Ken is ex-pre-war ZS6AQ and ZS14A and sends his greeting to all old VK friends, especially VK920.

A QSL to hand from ZS8B, Gerhard Schult, of Port Tswane, British South West Africa, states he is 19 years of age and a bricklayer by occupation. His c.w. signals can be heard on 14 Mc. around 01.00 G.M.T.

Friends of ZS8D, Ivan Quinsley, will be pleased to know that he has recovered from injuries received in a motor accident several months ago. Max Elaper, VK3AJR, Isle of Balmoral, Vic., is now at Melb. New Guinea, and as VK3AJR/VK3 has been active around 1000 G.M.T.

Jim Widdup, VK9WL, writing from Yorsklin, New Ireland, under date of April 18, indicates that he has not much time for the pursuit of Amateur Radio. Judging by the QSLs that come to hand, Jim makes very good use of the little time he can devote to the game. Jim, who has a lifetime of experience in the islands, the tropics and coastal radio, gives his age away by mentioning his acquaintance with several postal telegraphists at Darwin. I know it is well over 30 years since those men were at Darwin. Alas Jim, Peter Fenn passed on at Launceston about 15 years ago, but understand Joe Beuply can still answer the roll call.

This Bureau requires the current address of OK1WK, now in Australia.

Following are the addresses of Divisional QSL Bureaus (for application for incoming cards):  
N.S.W.—Jim Corbin, VK2YC, 78 Maloney St., Eastlawn, Sydney.  
Vic.—Gaulthier, VK3ZB, 26 Lucas St., Caulfield, S.E.B.

Qld.—Eric Laka, VK4EL, Old Cleveland Rd., Camp Hill, Brisbane.  
S.A.—Gus Luxon, VK5RX, 8 Brook St., West Mitcham, South Aust.

W.A.—J. E. Rumble, Box 7319, Perth.  
Tas.—T. Allan, Thirra St., New Town, Hobart.  
Federal (W.A.C. and W.B.E. applications):  
Ray Jones, VK9JR, 23 Lonsdale St., Box 1111, E.L.I. Vic.

## NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 28th April, at 8 p.m.

The annual general report was received and adopted and 20 new members admitted to the membership. Then the returning officer, together with scrutineers retired to count ball papers for the election of Council members for 1953-54. In their absence general business was transacted and finalised. The President, Mr. H. F. Tennant (VK5BK) thanked Council and expressed thanks for the good work throughout the year. By all accounts the Urunga Convention was an unqualified success. Council and its Institute representative by 2AAN and 2AYE. A full report on the Urunga gathering will be found elsewhere in this issue.

20R moved a vote of thanks to the Chairman for his sterling work during the year and 23D, organ

iser of the Urunga Convention, then addressed the meeting. Glass manager, Ian Appleby, gave an account of activities in A.O.C.P. Classes. Fred Phillips, who is Chairman of the Disposal Committee, gave an account of disposal operations and the long hours and hard work encountered. Fred and his many men are to be congratulated for an extremely fine performance and there are lots of satisfied customers.

14C reports that more QSL cards are going out of the country than are coming in and hopes that this state of affairs will be soon remedied.

On the motion of 2AYE, 2MM was invited to report on the Urunga show and he was followed by 2AAN in his capacity as official representative of the Institute at Urunga. Dave detailed the events there and forecast some of the things in store for the next gathering of the club. A vote of thanks to 23D, for his hard work in helping to make Urunga a success, was carried by acclamation.

A long discussion took place on a proposal that members at the monthly meetings should have a small card bearing name and call sign pinned in their coats. It is expected that Council will give very favourable consideration to this novel suggestion, and no doubt members will take advantage of the situation to make personal contact with those fellows they have not chance to meet, except on the ham bands.

On the motion for Council members 1050-51, the following were declared elected—M. Butler, 2AAN, M. Brown, 2OR, J. Corbin, 2YC, H. Kenna, 2AYE, J. Kierle, 2JL, W. 2KU, V. Wilson, 2VW, Vaughan Wilson, official operator of the voice of the Wireless Institute of Australia, N.S.W. Div. 2KARJ reported on transmissions during the past year, and enlarged on future operations of the official station.

It was disclosed that Eric Blinn, VK2VE, will be moving through British, Europe, etc., and perhaps Marledon. Needless to say 2CZ will be visiting every a Ham shack in these remote parts and would appreciate VKs listening for any calls. Eric was given a hearty send-off. No doubt the DX fraternity have it fixed to persuade some of the rare ones to look harder down to this quarter of the globe.

## EASTERN SUBURBS

VK5ARD, of Bondi, is having fun with an unusual antenna recommended for trial by 23D. This is the W8BDP all-band affair which, although as the title implies, originated in U.S.A., is described only in the R.S.B. Handbook. In other words, it is popular with Gs. It consists merely of an 84 feet length of wire and a 4000 p.f. capacitor. The latter is 8 ft. 0 in. long about 1/2 in. diameter. The system is to be used on 10 and 20, and 17 ft. long for 40 and 80. The CP must run inside the shack, at right angles to the antenna. It really does work, too, as witness 2KARJ's results on 40 and 80.

2CZ has been heard for a brief appearance on 40 phone after a long absence. It has been on 40 phone and finds difficulty in working some directions because of location; below a 300 ft. rise. Bob Quarr, 2ABQ, recently 2BQ, is having testing trouble with a modulator and is anxious to run

# DURALUMIN TUBING FOR WIRELESS AERIALS

Stocks Now Available for Immediate Delivery

ALL DIAMETERS 1/4" to 1 1/2" IN WALL GAUGES 16-18-20

Price List on request.

GUNNERSSEN ALLEN METALS PTY. LTD.

67 YARRA BANK ROAD, SOUTH MELBOURNE

Phone MKX 4621 (5 lines).

Telegrams: "Metals," Melbourne.



# Setting a New Standard in Communication Receivers— The "Commander" Double Superhet.

Free Data Sheets on Request

Interstate Representatives: West. Aust.—Messrs. Atkins (W.A.) Ltd., 894 Hay St., Perth. Queensland—Messrs. A. E. Harrold, 123-5 Charlotte St., Brisbane. In other States direct your inquiries to firms handling Bright Star Crystals.



T.C.C. 1.5 uF. 4,000 v.w. Condensers, £2 each. Chanex 2 uF. 3,000 volts d.c. working, £1/15/- each.

Ferranti 0-500 Microampere Meters, luminised dial, new, £2 each.

VALVES—R.C.A. 834, new, £1/8/- each. R.C.A. 6U7Ga, new, sealed cartons, 9/- each.

Sylvania 807s, 15/- each.

Wanted to Buy—TYPE 3 MARK II TRANSCEIVERS in good order.

CRYSTALS, as illustrated, 40 or 80 mx., AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs A. E. Harrold, 123 Charlotte St., Brisbane, A. G. Healing Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 400 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

A.W.A. Split Stator Transmitting Condensers, high voltage, £2/15/- each.

Screw-type Neutralising Condensers (National type), suits all triode tubes, Polystyrene insulation, 19/6 ea.

Prompt delivery on all Country and Interstate Orders.

Satisfaction Guaranteed.

**BRIGHT STAR RADIO** 1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: UL 5510.

**ELECTRONIC  
A&R  
EQUIPMENT**

*Demotes  
Quality*

**AVAILABLE NOW—  
TYPE P.S.5**

**Regulated POWER SUPPLY**  
for Frequency Meters, V.F.O.'s., etc.

Specifications:—  
Input—200, 230, 250 v. 40/60 c.p.s.  
Output—150 v. at 20 Ma. D.C., and  
63 v. at 1.5 amp.  
Size—5" x 4" x 5" high.  
Valves—6X5GT rect., VR150/30 reg

**TRADE PRICE**  
(inc. Sales Tax) **£5-9-8** (Less Valves)

Available from—J. H. Magrath & Co., 208 Little Lonsdale Street,  
Melbourne, C.1 (Phones: Central 3688, 4414).  
Wm. Willis & Co., 428 Bourke Street, Melbourne, C.1  
(Phone: MU 2486).

**A&R** *Electronic Equipment Co. PTY. LTD.*

Page 21



spends most of his time fishing these areas 4RT  
is still being sensitive about high power land  
which should enable him to equal 4WJ's DX efforts  
4RT is having some trouble, dry rot set in and  
he is rebuilding 4RT's 14 MC. o.w. has a very nice set-up and  
to know who would be interested in exchanging  
reading titles for W. cards. 4RT has moved into  
the new house and the garage is being converted  
is remotely controlled. 4RT has generated three  
date, just donated \$5/- to the Police Department.  
Bette got that sticker on the wind screen John.  
4RT is re-building receiver and transmitter. Has  
a dog called "CC" which Claude reckons has  
a TS note!

## GYMPIE ZONE

## SOUTH AUSTRALIA

The monthly general meeting for April was held in a very representative gathering and consisted of general business, the delegates to the conference report, and a wire recording of a portion of the conference. This last portion of the proceedings created quite a deal of interest and as I was unable to be present at the meeting, due to a previous appointment, I was forced to seek the meeting's reaction to the wire recording from a number of the members present. A few said that they were not sure they were able to think that it was a first-class entertainment, and gave them a good idea of just what takes place at the conference.

## SOUTH AUSTRALIA

SXU, our motormouth Treasurer, gave his annual report and by the time he was finished, the room was in a ferment. The members of the VRS Division did not want to break down and have a good cry, or to put their hands in their pocket and help the fast sinking VRS Division back on its feet. However, as all present are beginning to realise that nothing less than a credit balance of a couple of thousand pounds would cause "Sky-lock" to give even a ghost of a grin, they restrained their feelings and sat tight.

ing to give 80 metres a  
ting forward to hearing

I cannot say who were the victors, but I believe that "Romp" Barker (TRM) was present and I was sorry to miss him, but I had been away on my holidays, whilst he was in VEG, sorry "Romp." The meeting ended on a very satisfactory note with the distribution of the Q&A cards donated by the South Australian Government Tourist Bureau, for which all members are very grateful.

## MACKAY ZONE

formers were made available at the meeting, that it was found necessary to put the names in a hat to find who were the lucky ones. It was my duty to write the names on the cards, and drawing, and despite the necessary precautions that I took to see that Doc's name was mislaid, mutilated, dropped on the floor, and placed right on the bottom of the hat, I still secured the position of being among the lucky few. I should like to say this upstart, I'm bloused if I know how to stop him. RDW and SLW were familiar faces missing from the crowd until they came. They have both done good work in their respective areas, and we are glad that they are both too QRT to continue. Thanks fellows, for a job well done.

## QUEENSLAND

My paragraph last month regarding XYL's speaking on the air certainly got results, and if I were to attempt a few of the things they told me to do, I would need to be an acrobat. All I can say is, Puss Puss Puss!

### DARLING DOWNS ZONE

Dennis Kelly (ex-IAAF, now SDE) has settled in OK at Henley Beach and has been experimenting on two metres together with JEX. Dennis finds a lot of trouble has reared its ugly head on any other frequency he might wish to use. He has met

## BRISBANE ZONE

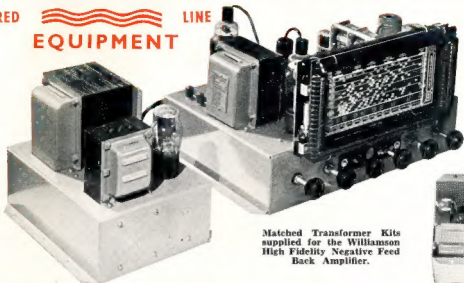
sympathy on this respect, but it means one less source of local QRM, say I with my tongue in my cheek.

For some understandable reason, the VRS Division's response at present is that equipment is not available for the use of members above the rank of sergeant, because just when all concerned are patting each other on the back on a splendid job well done, someone somewhere says, "Why doesn't someone else take a look at this?" and the next thing you know, "Everybody there gets a bucket of water and throws over the wall and myself to repeat it and then it comes again, so, once again I repeat, the equipment is not available." The VRS Division's checking service available, we are hoping to purchase an audio oscillator, and a modulated oscillator and any further particulars may be obtained from the VRS Division, UA 9115, by appointment at UA 9115. What's that you say? Why doesn't someone tell you about these things. Oh for the love of Pete, more buckets of





# RED LINE EQUIPMENT



Matched Transformer Kits supplied for the Williamson High Fidelity Negative Feed Back Amplifier.

## TRANSFORMERS of DISTINCTION for all classes of ELECTRONIC EQUIPMENT

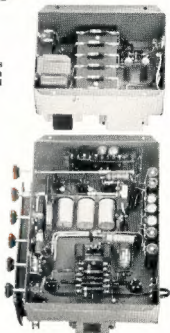
RED LINE specialise in Audio Frequency Transformers up to Frequency Modulation standards; Power Transformers up to 2 KW rating. BUT—see RED LINE for Transformers of ANY specification whether for Industrial Applications, Electronic Controls, Broadcasting, Amateur Transmitting, or Public Address Systems.

- Power Transformers.
- High Tension Plate Transformers.
- Low Tension Filament Supplies\*
- Heavy Duty Power Supplies
- Output Transformers.
- Insulated for High Voltage if required.
- Multi Impedance Modulation Transformers.
- Class B Driver Transformers.
- Swinging and Smoothing Chokes.
- Wide Range Audio Equipment.
- Frequency Dividing Networks.

## RED LINE EQUIPMENT Pty. Ltd.

CITY OFFICE: MU 6895 (3 lines), 157 Elizabeth St., Melbourne.

WORKSHOP: Central 4773, 2 Coates Lane, Melbourne.



A GUARANTEE



OF

DEPENDABILITY

Vaill's Electrical & Radio  
Pty. Ltd.  
Arthur J. Vaill Pty. Ltd.

Homecrafts Pty. Ltd.  
Radio Parts Pty. Ltd.

NEW SOUTH WALES:  
U.R.D. Pty. Ltd.

QUEENSLAND:  
B. Martin Pty. Ltd.  
A. E. Harrold.

VICTORIAN DISTRIBUTORS:  
Howard Radio Ltd.  
A. G. Healing Ltd.

Healing Pty. Ltd.  
Motor Spares Ltd.

Warburton Frankl Ltd.  
Lawrence & Hanson Ltd.

INTERSTATE DISTRIBUTORS:  
Deoradio Industries  
(Maryborough).  
J. Michelson & Co.  
(Mackay).

SOUTH AUSTR.:  
Gerard & Gosman Ltd.  
Newton McLaren Ltd.  
Unbehauen & Johnstone Ltd.

Radio Wholesalers.  
TASMANIA:  
Lawrence & Hanson Ltd.  
Noyes Bros. (Aust.) Ltd.



Looking for

# SELECTIVITY?

Then try . . .

## "AEGIS" HI-CORE I.F. TRANSFORMERS

Scientifically Designed  
Expressly for the  
Two-Stage I.F. Channel

### INCORPORATING THESE OUTSTANDING FEATURES—

1. Maximum Stability.
2. Excellent Selectivity, particularly types J22/J23.
3. Effects of Tube Loading reduced to a minimum.
4. "Miller Effect" Detuning eliminated.

#### MEDIUM SELECTIVITY—

Type J20 Interstage, Price 13/6 ea.

Type J21 Diode . . . Price 13/6 ea.

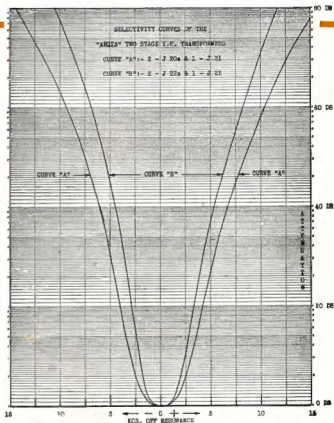
#### MAXIMUM SELECTIVITY—

Type J22 Interstage, Price 17/6 ea.

Type J23 Diode . . . Price 17/6 ea.

Special Discount to Amateurs!

Obtainable from:—



# AEGIS MANUFACTURING CO.

208 LITTLE LONSDALE STREET, MELBOURNE

or Selected Wholesalers throughout Australia.